STUDIES IN HONOR OF J. ALEXANDER KERNS

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OF
J. ALEXANDER KERNS

edited by

ROBERT C. LUGTON *and* MILTON G. SALTZER

2.4. Adjectives (including Participles) are in general declined much like nouns of various stem-classes, as pāpa- 'evil'; sg. nom. m. pāpas (II, like dēvas), f. pāpī- (Ib, like dēvī) or pāpā (Ia, like sēnā), n. pāpam (II, like dānam); svādu- 'sweet, pleasant'; sg. nom. m. svādus (II, like tarus), f. svādvī (Ib), n. svādu (II, like madhu). A few adjectives follow the declension of demonstrative pronouns at certain points, as anya- 'other'. sg. nom. m. anyas, f. anyā, but n. anyat (like tat, 2.32), sg. dat. m. n. anyasmai (like tasmai, 2.32) etc. — Regular Comparison follows one or the other of two types: (1) positive sg. nom. m. pāpas, svādus : comparative pāpīyān 'more evil', svādīyān 'sweeter' (this stem-class not illustrated in 2.) superlative pāpiṣṭhas 'most evil', svādiṣṭhas 'sweetest' (II), or (2) pos. priyas (II) 'friendly': comp. priyataras (II): superl. priyatamas (II).

2.5 Verbs: General Statement. As in the other IE languages generally, (1) most verb-forms may be analyzed into two 'morphemes', a particular stem + a particular ending, thus sg. 3 bharati 'he/she bears' and pl. 3 bharanti 'they bear' each contain the present stem 'bhara- 'bear' and the personal endings eg. 3 -ti and pl. 3 -nti respectively, and (2) some verbs (in Skt. most verbs) are strong (ie, build certain groups of their forms from one, others from another of several rather unpredictably related stems), others (in Skt. only the 'secondaries', cf. below) 'weak' (ie, build all their forms, with occasional minor exceptions, predictably from a single general stem). Skt. strong verbs may have four 'primary' stems from which both finite and non-finite forms are built, (1) the Present Stem, (2) the Future Stem, (3) the Aorist Stem, (4) the Perfect Stem, as well as various other primary stems from which only certain non-finite forms (e.g., the perfect passive participle) are built, and a number of 'secondary' present stems, Passive, Causative, etc.; these latter (except the Passive, cf. below) are 'weak'; ie, their own future stem, aorist stem, etc, are predictably formed to the corresponding pres. stem (really a general stem). — Often one or more of the primary stems is missing in a particular verb, and it is impossible to predict the existence or exact form of any one such stem merely from a knowledge of one or all of the others. It is not the practice of the nat. schs. to give a series of 'principal parts' (ie, a series of actual paradigmatic forms exemplifying each stem in turn), nor even to cite a particular verb as a whole by any one particular paradigmatic form; instead, from all its primary stems taken together they abstract, by rules of their own, a so-called "root" by which to cite the verb as a whole. Cf. examples below:

Root as abstracted by nat. schs.	(1) Pres. Stem	(2) Fut. Stem	(3) Aor. Stem	(4) Perf. Stem
bhṛ- 'bear'	bhara-	bhariṣya-	bhāriṣ-	jabhar-
pā- 'drink'	piba-	pāsya-	pā-	papā-
muc- 'set free'	muñca-	mōkṣya-	mūmuca-	mumōc-
as- 'be'	as-	—	—	ās-
dā- 'give'	dadā-	dāsya-	dā-	dadā-
yuj- 'join'	yunaj-	yōkṣya-	yuja-	yuyōj-

Stems 1-4 usually have allomorphs of generally predictable form and distribution: thus the pres. stems bhara-, piba-, muñca- have beside them bharā-, pibā-, muñcā- and bharē-, pibē-, muñce- occurring predictably in certain persons and numbers, etc. Moreover, more than one possible pres. stem, aor. stem, etc, often occurs to a given root; thus the root bhṛ- has not only the pres. stem bhara- (with its allomorphs bharā-, bharē-) shown above, but also a pres stem bibhar- (allomorphs bibhṛ-, bibhr-), etc. — A listing of all stems to all roots is given in W.D. Whitney, Sanskrit Roots, 1885, reprinted 1945 (abbr. WSR).

From its various stems a Ved. Skt. verb may build forms (if its meaning permits) in (a) three voices: active, middle (direct or indirect reflexive, but sometimes its meaning differs little from that of the active), passive (although except in the present and imperfect tenses there are in general no specifically passive finite forms, middle forms of other tenses being used with passive meaning when needed); (b) five moods: indicative, injunctive, imperative; subjunctive, optative; (c) seven tenses: present, imperfect; future, imperfect-future; aorist; perfect and (rare) pluperfect; of these the imperfect, imperfect future, and pluperfect are formed only in the indic. mood; and (d) the following persons and numbers: sg. 1, 2, 3; du. 1, 2, 3; pl. 1, 2, 3; also (e) various participles, etc. — In Cl. Skt. the injunc. and sbj. moods are obsolete, and of tenses, only the pres. and ipf. are common.

2.51 Present Stems are of two great classes: thematic (those whose normal forms end in a-, as bhara-, piba-, muñca- above) and athematic (all others). Both have numerous subclasses; however, all the thematic subclasses are inflected alike except as regards their accentuation in Ved. Skt.; in Cl. Skt. even this distinction disappears. Verbs with athematic pres. stems have numerous individual peculiarities. — From the pres. stem are formed: (1) the Pres. Indic. Act. and Mid., each with a distinct series of 'primary' endings (with some allomorphs apportioned to them and athem. stems, etc.); (2) the Pres. Injunc., Ipv., Sbj., Opt., and Ptcp. Act. and Mid., not shown here; (3) the Ipf. Indic. Act. and Mid., each with a distinct series of

J.A.K.'s students will remember with affectionate nostalgia his micro-calligraphic sketches of the IE languages; this specimen will surely be familiar.

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ROBERT A. FOWKES

J. A. K.

You are lucky. I had originally intended to present a paper on "The Formation of Noun Plurals in Celtic, with Special Reference to Neologisms in Brythonic". Instead of that, I am permitted the luxury of speaking on a favorite subject of mine — and yours — J. Alexander Kerns — Alec — J. A. K. My first encounter with him occurred only after some hesitation and regrettable procrastination. In 1934 or 1935 I was rushing to finish an M. A. thesis on Gothic. Friend and fellow graduate-student, Ben Schwartz, he in Classics, I in Germanics, advised me to show the first draft to a Mr. Kerns of the Classics Department. I had heard the name Kerns before, and I had heard rumors of his incredible versatility and tremendous learning. But in those days some of us were reluctant to approach the faculty. It seemed particularly inappropriate to impose on a member of another department. Little did I know! Consequently, my M. A. thesis was never taken to him. If it had been, it would assuredly not exhibit those rough spots and blunders with which it abounds.

It was not until three years later that I mustered up sufficient courage to ask Professor Kerns' permission to audit his course in Indo-European. In the meantime I had studied a year abroad and had then transferred to the Columbia Graduate School. When I arrived there in September, 1937, Professor Louis H. Gray, Sanskritist and Indo-Europeanist, asked, "Why do you come to us, when you have that man Kerns? He's a whole university!" This was no mere hyperbole.

In 1938 I arrived at 644 East Building. J.A.K. and half a dozen students were assembled. Cornelius Crowley was among them. Bernard Blau had not yet appeared, meteor-like, on the scene. Abe Holtz had been and was later to re-appear. The revolutionary arrival of Jean Griffiths was yet to come. Ben Schwartz had been, of course, also Harry Alderman, Bill Stahl (now, alas, the late William H. Stahl), and others galore. The transformation *Wunderkinder* had hardly been generated.

Kerns welcomed me, a graduate student still wet behind the ears. But he was somehow impressed by the fact that I was simultaneously an instructor. "Fowkes, I'd be honored to have you give this course jointly with me; it is, unfortunately, too late to have it listed in the bulletin." I laughed, thinking that this was a great joke. But I soon saw that he was not jesting. And I failed to see then, as I fail to now, why

greatness acts humbly before its inferiors. Be that as it may, I was soon absorbing the incomparable scholarship and knowledge of Professor Kerns and aspiring to glean a tiny portion of the wisdom behind it. I had studied with some big 'names' in Germany (in Celtic, Germanic, Linguistics) as well as one or two who regarded themselves as names, and it soon became clear that this man had in his head more than all of them put together had in their notes. Not that he was without notes himself — and his meticulous microcalligraphy, ground out in many dedicated hours, was unstintingly shared with students. Yet it was easy to underestimate him. At the end of one session, J.A.K. noticed that I had with me Henry Lewis's book on the development of the Welsh language (*Datblygiad yr Iaith Gymraeg*). "May I have a look at that, Fowkes?" Turning to the first page, I foolishly began to translate. In a tone so mild, yet cloaking a world of devastating rebuke in its very mildness, he murmured, "I don't know *much* Welsh, but I can read *this*."

We have learned to suspect that there is no subject on which he is really uninformed. It is no secret that he is a great railroad buff. In fact, rumor has it that he once collected locomotives — had a yard full of them, 'tis said. When young John Schabacker, now Chairman of German at Drew, revealed *his* interest in railroading, J.A.K. had found a kindred soul, and after class the two occasionally exchanged recondite bits of lore at which the rest of us could only marvel. But the Kernsian knowledge of railroading and kindred topics has none of the superficial characteristics of a mere hobby. An engineer I once met asked me whether there was such a person as J.A.Kerns at NYU. I assured him there was, and only one. The man then told me a story that was amazing, but not surprising. (I admit that I have this second-hand only). At some congress or meeting of railroaders, a paper had been presented on a technical subject. During the question period somebody asked for certain very specific data. The speaker admitted that he did not have the exact figures at his finger tips, but said he did have the information in his room and would "look it up". A mild-mannered man then arose, managed to get the eye of the chairman, and gave the requested data, calmly, politely, and accurately. When the chairman asked which company he represented, the man replied, "Classics Department, New York University".

Mild as he is, he has his vigorous prejudices and pet predilections. I would not advise you to kick a cat in his presence, or sell your Brugmann, or praise the diesel locomotive (he has written a poem or two against the latter obscenity). As a young man he lived for a while in a rooming-house in the Midwest frequented largely by railroad men. We can imagine their wonderment at the contents of the packages delivered by the mailman — mostly from Stechert's in New York City: Hungarian grammar, Sanskrit, Old Irish, Modern Polish, perhaps comparative Finno-Ugric, etc.

The locomotive looms large on the horizon of his scale of values, to mix a few metaphors. It even serves as a criterion by which to measure other phenomena and activities. There used to be two practice organs in the basement of the School of Education building. I don't know whether recent enlightened policy has decreed their

destruction or not. They were available for 20 cents an hour. J.A.K. and I went there several times. The first time, he played Bach's *Toccata and Fugue in D Minor*, favoring such complimentary stops as 'great' and 'swell' — maybe they are not stops; at any rate, he never indulged in a *voiceless* stop.

I soon discovered that he also had a fondness for the pagan grandeur and sensuality of Welsh hymns; *Aberystwyth* was a favorite. Far down the list was *Cwm Rhondda*, one that *I* like: it's in the major!

I next learned that our friend was also a composer, and he regaled my ears and several floors of the building with a striking composition inspired by Hardy's *Dynasts*. Music had evidently played a large rôle in the life of the Kerns family back in Michigan. Once or twice he was visited by a gracious and talented sister (Marguerite, I believe) who was music critic for a midwestern newspaper. Asked whether she would like to hear us play the pipe organ, she was given no time to reply. J.A.K. ran off one or two magnificent numbers, *sempre fortissimo, sempre troppo*; I murdered a Welsh song or two, faking the pedal notes. And the only comment Alec's music-critic sister could utter was, "It's incredible — the volume you get from that thing!" And the wonderfully appropriate Kernsian rejoinder was, "Yes, it's the closest thing to driving a locomotive!"

I remained an auditor for several years, in courses on Indo-European phonology and morphology, history of Greek and Latin, once Oscan and Umbrian, also Semitic, Baltic, etc., always learning something new, always profiting, always admiring the man. Sometimes the auditors outnumbered the paying guests. Once there was a gentle lady from the New York Public Library plus some six or seven hardbitten auditors, devoted disciples of Kerns to a man. With complete lack of chivalry, not gained from the *guru*!, we groaned when she replied to Kernsian questions with antiquated, school-marmish answers. She nearly fainted when asked for forms in Old Church Slavic or Avestan and wondered how we knew them. She was also somewhat less than perfectly prepared in phonetics. Once Professor Kerns was trying to demonstrate the difference between a bilabial and a labio-dental voiced fricative. As he demonstrated, he approached her frightened physiognomy closer and closer. Finally she blurted out, "Professor Kerns, if you get any closer, I'll be kissing you!" He grinned with obvious delight.

It was, perhaps, the unofficial sessions that best revealed to us the man Kerns. He has always offered, sometimes with utter disregard for his health and strength, instruction — no, that's too pale a word — experience in a wide range of subjects to small but interested groups. And, always apologetic for his alleged 'lack of knowledge', he has evinced deeper understanding and quicker grasp of the system of a language than anybody I know. I participated as grateful guest in such sessions on Russian, Turkish, Arabic, Sanskrit, Japanese, Gaulish. In the case of the latter language, J.A.K. immediately bestowed upon me the title of 'specialist', presumably because of a few drops of Celtic blood in me. And, as he and I, together with Neil Crowley, another wild Celt, studied the cryptic inscriptions in Dottin's *La Langue gauloise*, he insisted

that I was the teacher. He even insisted on accompanying me to the subway and pay-
ing my fare — then five cents.

Once or twice outsiders would come to join us as tutors. The great Ataturk was one.
Looking like the grandfather of all mideastern wrestlers, this man with a powerful
voice and somewhat less powerful brain, bellowed, "Give me a white chalk and a black
table and I teach you Turkish for free!" It happened that there was already present
another volunteer teacher, a lady with a name ending in -IAN, a patronymic which in
itself reveals certain serious socio-political and ethnic complications. Ataturk regarded
her as his natural enemy, perhaps rightly so. He objected to many things, e.g. to the
form of the word for 'boy' which she (and our book) used, claiming that it was positi-
vely indecent. They both came for two or three weeks more. Then we heard that he had
threatened her for supposedly ruining his chances for a professorship at NYU.
But it was he who died within the month. Ah, the mysterious East! When we entered
East 644, behold the glorious East was there, ancient and modern, and everything
between East and West. *Linguistici nil a me alienum puto* might well have been ins-
cribed above J.A.K.'s desk.

I haven't begun to speak, yet my time is up. How can one ever exhaust the wondrous
subject of J.A.Kerns? Now can one ever really fathom the complex subject comple-
tely? I've embarrassed our friend too much already. I purposely refrain from touch-
ing upon those aspects of this life and character that constitute the really essential
Kerns: grief and joy in his private life; stoicism in adversity; loyalty and friendship
(a two-way street, with people like Chester Ferlazzo deserving a medal); tenderness
and strength; and all the rest. We are not unmindful of kindness and humane con-
sideration shown him by the department and colleagues during periods of illness and
troubles. And the very program presented here demonstrates how people feel about
J.A. Kerns. But even then, we offer him, a confirmed vegetarian, a celebration in the
form of a steak dinner! (It's better than spinach, Alec).

I wonder if things would have been different in the career of J. Alexander Kerns if
we had had a department of linguistics? What university worthy of the name is now
without one? It would be taking unfair advantage of the occasion to propagandize
for such a department, but nothing would really be dearer to J.A.K.'s heart. Haste
the day!

It will be noted that several of the contributions to this *Festschrift* are not primarily
linguistic in nature. That is merely further evidence of the wide-ranging interests
and varied competence of the man honored. One may point specifically to the article
by Dr. William E. Buckler on Thomas Hardy: Hardy is one of Professor Kerns'
favorite authors! Finally, we may note with gratification that the publication of this
volume has been enormously facilitated by a contribution from Washington Square
College. Both Acting Dean R. Bayly Winder and Vice-Chancellor William E. Buckler
have been instrumental in this, and our indebtedness to them is profound indeed.

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WILLIAM E. BUCKLER

THOMAS HARDY IN NEW PERSPECTIVE

Thomas Hardy's reputation as a writer has had to bear the ponderous weight of many critical and non-critical interests: he has been one of the darlings of the topographical school; his works have been ravaged for documentation by historians of late-Victorian ideas; the presence in his writings of significant transplants of Kant or Schopenhauer or Von Hartmann or Comte or Bergson has been repeatedly asserted; some have censured him for his philosophical stupidity and praised him for his craftsmanship, while others have admired his systematic pessimism and dismissed as 'puerile' his "notions of the problems of telling a story". In the language of a recent critic "Hardy is without doubt often clumsy and careless .... His style often clangs and clashes with highflown abstractions and overwritten figures ... the great bulk of his poetry is only a hairsbreadth above that of the gift books. He was been done almost [as] great a disservice by his own temptation to sentimentalize and preach as his critics did by mooning over his 'sweetness' and 'tenderheartedness', or as James did by cruelly calling him 'the good little Thomas Hardy.'"

And yet, Hardy's viability as a writer has persisted right through to today. He continues to be widely read and critically admired.

Before entering upon the whys and wherefores of this interesting matter, let me dissociate Hardy from some major forces in the continuity of modern fiction and associate him with others.

Hardy did not belong to that intense school of literary artists which had been emerging since the time of Flaubert: he was not an esthete; he was not a naturalist; he was not a formal experimentalist. He was not a Flaubert or a Zola or a Joyce or a James. I say this in commendation of Hardy, though not in condemnation of the other writers mentioned. It is one of the glories of Hardy that he was not a dogmatist. He was tentative and exploratory. His posture throughout his life as a man of letters was that of his own poem "Nature's Questioning": "We wonder, ever wonder, why we find us here." He did not tell the world how to think; he did not ride a hobby-horse about *the one way* to write a novel; he did not sit around like a Rodin 'thinker' trying to find the exact and only word. He wrote 15 novels; the equivalent of a well-stocked volume of short stories; between 900 and 1,000 short poems — average length,

less than a page; a complex epic drama, *The Dynasts*; and a few pieces of non-fictional prose. All this spread over approximately sixty years at the trade.

Now let me suggest Hardy's proper associates in the continuity of modern fiction. They are George Eliot on the one side and D.H. Lawrence on the other. There is something in his work which reaches also toward Joseph Conrad and William Faulkner. Like all of them, he searched "the abysmal depths of personality"; like all of them, he held a melancholy view of the anti-heroic character of modern life; like all of them, he probed moral questions with an attempt, at least, at psychological realism — things as they in fact are, people as they in fact are. Like them, in varying degrees, he focussed on provincial rather than cosmopolitan centers for his fabulous parables; like them, he tried to create a special world, half real, half imaginary, in which to realize his microcosmic human dynasties and destinies. He was not as experimental as Faulkner; he was not as compellingly rhetorical as Conrad; he did not achieve the sensuous intensity of Lawrence; and Eliot's work has a dimension of gradualness which Hardy's lacks. But Hardy shares with them all a keen sensitivity to the "ache of modernism" — the fret and the fever, the derision and disaster — frustrated aims and castrated persons.

Thomas Hardy was a humble, thoughtful man of letters who understood his role as a novelist quite simply, namely, to tell tales that were exceptional enough to be interesting. And as to his so-called stern philosophy of life, the relative lack of weight he himself gave to it can be seen in the poem "Afterwards" — Hardy's "Crossing the Bar" — written twenty years after he had stopped writing novels:

> When the Present has latched its postern behind my tremulous stay,
>   And the May month flaps its glad green leaves like wings,
> Delicate-filmed as new-spun silk, will the neighbours say,
>   "He was a man who used to notice such things"?
>
> If it be in the dusk when, like an eyelid's soundless blink,
>   The dewfall-hawk comes crossing the shades to alight
> Upon the wind-warped upland thorn, a gazer may think,
>   "To him this must have been a familiar sight."
>
> If I pass during some nocturnal blackness, mothy and warm,
>   When the hedgehog travels furtively over the lawn,
> One may say, "He strove that such innocent creatures should come to no harm,
>   But he could do little for them; and now he is gone."
>
> If, when hearing that I have been stilled at last, they stand at the door,
>   Watching the full-starred heavens that winter sees,
> Will this thought rise on those who will meet my face no more,
>   "He was one who had an eye for such mysteries"?
>
> And will any say when my bell of quittance is heard in the gloom,
>   And a crossing breeze cuts a pause in its outrollings,
> Till they rise again, as they were a new bell's boom,
>   "He hears it not now, but used to notice such things"?

There is nothing here about conflicting creeds and settled doubts, but only a testament to Hardy's genuine and enduring interest in nature — its beauty, its silent power and pathos, its mystery.

Efforts are sometimes made to assign heavy continental influences to Hardy. I am personally very skeptical of such efforts: even the best documentation has proved, in the end, quite tenuous. Hardy was to an extraordinary degree a native son: the English Bible, Shakespeare, Milton, Malthus, Shelley, John Stuart Mill, Charles Darwin, Swinburne, and Matthew Arnold had a more pervasive influence on Hardy than any of the continental writers and thinkers. Even Freud, to whom Hardy would have been deeply susceptible and for whom Hardy unconsciously contributed to a proper critical climate, came too late to affect his novels.

Hardy was significantly influenced, not only by *Paradise Lost*, but also by Milton's divorce pamphlets and by *Areopagitica*. He belonged to the generation which learned *On Liberty* almost by heart; and Mill's essay "Nature", in *Three Essays on Religion*, provides one of the ideological alternatives set forth in Hardy's poem "Nature's Questioning." Darwin's *Origin of Species* colored all of Hardy's thinking about man and his relations to nature; and Hardy thought of Malthus in Darwinian terms.

Matthew Arnold could almost be called the spiritual father of *Jude the Obscure*. Hardy frequently alludes to or quotes from Arnold in his novels; and two Arnold passages, both quoted in *Jude*, lie close to the heart of that novel. One is the famous description of Oxford as the "home of lost causes, and forsaken beliefs, and unpopular names, and impossible loyalties!" from the preface to *Essays in Criticism*, First Series. The other, from Arnold's essay on Heinrich Heine, is less familiar and deserves to be quoted in its entirety. It is Arnold's definition of "The Modern Spirit" and the foundation-idea in his critical prose:

Modern times find themselves with an immense system of institutions, established facts, accredited dogmas, customs, rules, which have come to them from times not modern. In this system their life has to be carried forward; yet they have a sense that this system is not of their own creation, that it by no means corresponds exactly with the wants of their actual life, that, for them, it is customary, not rational. The awakening of this sense is the awakening of the modern spirit. The modern spirit is now awake almost everywhere; the sense of want of correspondence between the forms of modern Europe and its spirit, between the new wine of the eighteenth and nineteenth centuries, and the old bottles of the eleventh and twelfth centuries, or even of the sixteenth and seventeenth, almost every one now perceives; it is no longer dangerous to affirm that this want of correspondence exists; people are even beginning to be shy of denying it. To remove this want of correspondence is beginning to be the settled endeavour of most persons of good sense. Dissolvents of the old European system of dominant ideas and facts we must all be, all of us who have any power of working; what we have to study is that we may not be acrid dissolvents of it.

Hardy may also have learned his respect for classical theory and practice from Matthew Arnold, who was its most visible and compelling exponent during Hardy's formative years.

The one really great non-English influence on Hardy, other than the Bible, was

classical theory and practice — the theory of Aristotle and the practice of Euripides, Aeschylus, Sophocles, and Homer. This influence is evident from *The Return of the Native* (1878) to *The Dynasts* (1903-1908), and it is suggestive to note that this classical influence became considerable just at that moment (*The Return of the Native*) when Hardy both entered his majority as a novelist and turned his novels toward service as anatomizers of the modern condition. Clym Yeobright is Hardy's first modern man. The beginning of this classical influx has been demonstrated adroitly by John Paterson in a monograph entitled *The Making of "The Return of the Native"* (University of California English Studies, No. 19):

... Hardy evidently had in mind a formal and structural analogy with Greek tragedy. In Eustacia's moments of high passion, for example, he used the convention of the set speech and the soliloquy. In isolating the Yeobrights and the Vyes from the community of humble peasants, he paid at least token respect to the traditional separation of the principals of the action from the chorus. In planning to organize the novel in five books, he doubtless intended an analogy with the five acts identified with classical drama, and in confining the action to the heath and the time to a year and a day, he sought to preserve, as he would later acknowledge, the unities of time and place.

The student who wishes to follow this matter through should turn to *The Mayor of Casterbridge* (1886), in which Hardy follows classical theory and practice with great fidelity; and *Jude the Obscure*, in which formal classical control of experience succumbs somewhat to an overwhelming anxiety over the pathetic conditions of modern life.

One of the basic qualities of Hardy's writing results from his ability to 'instract', rather than to abstract, ideas — based on a recognition that beliefs are one of the most exciting dimensions of personality, coupled with a demonstrable conviction that experience, not argument, is the fundamental concern of the artist. Hence his characters are never stupid: their moral and intellectual horizons are circumscribed, and ignorance inflicts their wounds; and the reader who rebels against Hardy's disposition of their fates may find upon reflection that Hardy was more convinced of the relevance of belief to destiny than we are.

These, in brief, are the sustaining qualities which I see giving life and permanence to Hardy's major works:

(1) his thoughtful, tentative, exploratory posture;

(2) his unconscious sophistication, which enabled him to realize that novels and poems anchored in the world which he knew, however provincial, however pastoral, would have an innate and abiding life;

(3) his need to create, and therefore his creation of, an imaginary, formal extension of that world into a self-sufficient dynasty, a compelling contemporary fable;

(4) his desire, again unconsciously sophisticated, to give his pastoral world an unpretentious literary definition through the modernization of classical theory and practice — thus setting up a muted tension between the rural and the ritualistic, between contemporary local color and ancient literary principle;

(5) his acute sensitivity to the decay of historic habits and folkways and the consequent disorientation of the sensitive modern individual — drifting between an incipient rational individualism and a hierarchy of customs and rules, dissolving but not yet dissolved, clung to without being believed in;

(6) his probing, again tentative and exploratory, of the relationship between the convict and the conviction; and

(7) his determination that a story should be, quite simply, interesting.

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CHARLES R. BARTON

THE VERBS "LINIM" AND "EŁANIM"
IN OLD ARMENIAN[1]

1. Although there are generally recognized etymologies for the common Old Armenian verbs *linim* 'become, be' and *ełanim* 'become, be', few scholars would consider them wholly satisfactory. The conventional derivations are: (1) *linim* < *$\hat{k}lei$-, cf. Avest. *sri-nu-*, Gk. *klī́nō*, Lat. *clīnō*, OHG *hlinēn*, OLit. *šlienù* 'lean'; also, without nasal characterization, Skt. *śrayati*, Avest. *sray-*, OLit. *šliejù*, dial. *šlejù* 'lean';[2] (2) *ełanim* < *elə-, cf. Gk. *eláō*, *elaúnō* 'drive, march', etc.[3] From this last root is also conventionally derived Arm. *elanem* 'ascend, go forth'.[4]

Despite the many difficulties involved, the etymology *linim* < *$\hat{k}lei$- seems to me correct. It is here proposed to derive *ełanim* < *$\hat{k}lei$- as well, and to consider this form a secondary back-formation built from the aorist *elē* (*ele-y*), which will be considered phonological.

2. Doubts concerning the derivation *linim* < *$\hat{k}lei$- are generally advanced for semantic reasons. Hübschmann pronounced the etymology, "Unwahrscheinlich, der Bedeutung wegen."[5] Something of a semantic parallel, however, may be seen in

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Skt. mid. *śrayate* 'be (located)' and Gk. perf. *kéklimai* 'lie on, live on or by'.[6]

A more serious difficulty concerns the morphological building of the preform. Arm. *linim* cannot be closely connected with forms which reflect deep or reduced grade root vocalism such as OHG *hlinēn*, OSax. *hlinōn*, Lat. inf. *clīnā-re* (*$\hat{k}l\breve{i}$-nā-*) or Gk. *klī́nō* (*$\hat{k}lin$-i̯ō*), since the reflex of PIE *$\bar{i}$ or *i in unstressed Old Armenian syllables is ø.[7] Accordingly a full-grade preform (with thematic nasal suffix) *$\hat{k}lei$-ne- > PArm. act. *lē-né-mi* → Arm. *linim* must be assumed.[8] The type of present stem consisting of full-grade root characterized with nasal suffix is uncommon but not unknown elsewhere in Indo-European. Thus, Gk. *tém-nō* 'cut': aor. *é-temo-n* or *é-tamo-n* (but Dor. pres. *tám-nō*, etc.), cf. here the Lithuanian cognate *šlienù* (< *$\hat{k}lei$-nō*).[9] This type also occurs in Arm. *dnem* 'place, put' (< *$dh\bar{e}$-ne-*, not *$dh\partial$-ne* > Arm. **danem*), cf. Russ. *dě-nu* 'put'.[10] Other examples are either denominatives or originally simple thematics secondarily characterized by the productive formant *-ane-* (cf. Gk. *-anō*). Thus, *bucanem* 'nourish': *boyc* 'food', *lizanem* 'lick': *lizem* 'lick'; cf. Gk. *thēgánō* 'whet': *thḗgō* 'whet'.

Finally, the *-i-* of Armenian presents in *-im*— which function both as passives to presents in *-em* (e.g. *berim*) and as independent forms (i.e. deponents with no corresponding presents in *-em*) generally with a stative-intransitive meaning (though a few transitives, e.g. *tanim* 'lead' and *unim* 'have', occur) — is to be found in an archaic suffixal formant *$-\bar{i}$/i-*. As is well known, this formant together with a thematic allomorph *-i̯e/i̯o-* underlies a number of statives in Balto-Slavic, e.g. Lit. 1 pl. *séd-i-me*, OCS 1 pl. *sěd-i-mъ* 'we sit' (cf. Arm. *nstimk* 'we sit' < *ni-sēd-i-*[11]); Lit. 1 pl. *bùd-i-me* 'we are on guard', OCS 1 pl. *bъd-i-mъ* 'we are awake'; et al. In Indo-Iranic and Greek the thematic allomorph became widely generalized: in the former it is the sign of the passive voice in such forms as Skt. *budh-yá-te* 'he is awakened': *bódha-ti* 'he awakens (tr.)'; in the latter a number of statives can be cited, e.g. *hézomai* 'sit' (< *sed-i̯o-mai*), *maínomai* 'be crazy' (< *mn̥-i̯o-mai*). In Armenian the athematic variant became generalized as a sign of stativeness or medio-passiveness in the present indicative. Ultimately it was extended to forms already characterized with nasal suffix, e.g. *lk'anim* : *lk'anem*.[12]

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[6] Hübschmann 451-2, *IEW* 601, *LatEW* 235.

[7] Solta 86-7, *Esquisse* 62-3, Hübschmann 410.

[8] It is impossible to decide at what point the active forms were eliminated by the medio-passives with their specialized meaning 'become'. One could as well reconstruct a very archaic PArm. **$\hat{k}lei$-n-i-* (> *lēni-mi* > *linim*) of which the second formant, *-i-*, is as described below.

[9] Apparently more archaic than *šlinù* which Fraenkel considers a new back-formation from the preterite *šliniaũ*. *LitEW* 1004.

[10] *IEW* 236.

[11] I am disposed to consider the Armenian stem-formation exactly parallel to that in Balto-Slavic, despite the current opinion that lengthened-grade root vocalism (*sēd-*) is an exclusively Balto-Slavic neologism (cf. Mikkola, *Ursl. Gram.* 3.71). For alternative reconstructions (*ni-zdi̯ō*, *ni-zdē-*, *ni-sedē-*, etc.) see *IEW* 885, Brugmann, *Grdr.* 2.171, and especially *Esquisse* 107-8 with a discussion of the difficulties involved.

[12] Cf. Solta 117. It must be observed that the IE present stem formant *-i̯e/i̯o/ī/i-* was not restricted to statives or medio-passives. In active or transitive forms the thematic, rather than the athematic

3. In my opinion, Frisk is entirely correct in rejecting the identification of *elanim* with IE *ela- seen e.g. in Gk. *eláō, elaúnō,* etc.: "Arm. *elanim* 'werden' mit dem eigenartigen und offenbar alten Aorist *elē* (aus *ele-y) hat, von der abweichenden Bedeutung abgesehen, auch wegen des velaren *l,* das eine Konsonantengruppe *ln* oder *ls* voraussetzt, auszuscheiden."[13]

4. At this point it must be observed that the aorist indicative *elē* serves as the preterite to both present forms *linim* and *elanim.*[14] In view of the fact that present stems of *$\hat{k}lei$- occur throughout the IE dialects both with and without nasal suffixes, and that competing presents of each type can be cited in Avestic (*sray-*: *sri-nu-*) and Baltic (OLit. *šlejù*: *šlienù*), it is reasonable to assume that a similar situation obtained in early Pre-Armenian. If we assume a simple thematic present stem *$\hat{k}leie$- (originally competing with suffixed *$\hat{k}leine$-), then the aorist *elē* (*ele-y) may well derive from an archaic augmented imperfect formation *e-$\hat{k}leie$- (= Skt. *a-śraya-t*) to which the medio-passive endings of the aorist (1 sg. *-y,* etc.) became attached at a later time.[15] The velar *l* derives from medial *$-\hat{k}l$- (becoming PArm. *$-l\hat{k}$-, later *$-ls$- by the laws of metathesis of *muta cum liquida*[16]) as against initial *$\hat{k}l$- > palatal *l-* in forms without augment, e.g. *linim.*[17]

Within the chronological development of Pre-Armenian the nasal-suffixed presents eventually excluded those built from the simple thematic stem (*$\hat{k}leie$-). This occurrence — possibly reinforced by the intrusion of a new analogical imperfect, *linei,* etc. — led to the displacement of the archaic imperfect *ele-y and its subsequent incorporation into the aorist system. Ultimately the phonetic disparity between the new aorist *ele-y and its present *linim* encouraged the formation of a new present *elanim* on the somewhat imperfect analogy of the many verbs with presents in *-anim*: aorists in *-ay,* e.g. *usanim*: *usay, aganim*: *agay, lk'anim*: *lk'ay,* et al.

5. There exist some forms of *linim* which, both because of their syntactic function and because of their presence alongside of forms with nasal suffix (e.g. 2 sg. pres. imv. *linir,* etc.) are descriptively classified under the aorist system. These forms are

variant, seems to have been generalized. Cf. Arm. *jnjem,* 'kill' = Gk. *theinō,* 'kill' (*Esquisse* 107), Arm. *kočem,* 'call': ON *kvedja,* 'greet, address'. Cf. *IEW* 481, *Esquisse* 108.

[13] *GEW* 483.

[14] This important fact was pointed out by R. Godel, *CFS* 11.42-4. Godel's study (based on the Gospel of Matthew and the first 12 chapters of Eznik) indicates that the usual forms for 'become' in the indicative are pres. *linim*: aor. *elē.* This situation continues in Modern Armenian, e.g. East Arm. pres. inf. *linel*: hist. perf. 1 sg. *yeǧa.* Godel further suggests that the present *elanim* may always have been only a literary form.

[15] Since in many cases the old PIE endings would have been obliterated in the course of normal phonological development.

[16] See W. Winter, *Lg.* 38.259-262, for a detailed discussion of these laws.

[17] The phoneme *l* does not seem to stand in initial position in a pure Armenian word. Forms such as *lambar* 'lamp' and *lek* 'helm' are loan words (Hübschmann 351, 310). See Mann 134-5 for possible exceptions (all etymologically uncertain). For the development *$\hat{k}l$- > *l-,* cf. *lu* 'known': Gk. *klutós* 'famed' (Winter, *loc. cit.*).

not identical with those appearing in the corresponding places of the paradigm of *ełanim*. They are 2 sg. aor. imv. *le-r* (with analogical 2 pl. *le-ruk'*): 2 sg. aor. imv. *elijir* (2 pl. *eleruk'*); 2 sg. aor. subj. *licis* (1 sg. *licim** is wanting), etc.: 1 sg. aor. subj. *elēc*, 2 sg. *elicis*, etc.; aor. pple. *leal*: *eleal*. It is here suggested that all of these forms derive from the unaugmented simple thematic present stem **k̂leįe-* > Arm. *le-*.[18] Thus *le-r* is morphologically a displaced present active imperative, cf. *bere-r* < **bhere-*. Similarly, *licis* corresponds to pres. subj. mpsv. *bericis*, and *leal* to *bereal*, *sireal*, etc.[19]

The aorist forms built from the (archaically imperfect) stem *eł(e)-* would then be neological, as is the present *ełanim*.

<div style="text-align: right">Sir George Williams University</div>

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[18] For the phonological development **-eįe-* > Arm. *-e-* see *Esquisse* 52 (*sirem* > **sēr-eye-mi*).
[19] These participles are sometimes built from the present stem as well as from the aorist stem. Jensen 105-6.

CORNELIUS JOSEPH CROWLEY

OLD SPANISH *MONCLURA* AND *ODIÇEPÇON*: A PROBLEM IN ETYMOLOGICAL RECONSTRUCTION

Two Old Spanish ἅπαξ λεγόμενα, *monclura* and *odiçepçon* have continued to defy adequate etymological analysis. The one is found in *El Poema de Mio Cid*, line 3652 in the phrase *las moncluras del yelmo* and the other in *El Libro de Apolonio*, line 300d, which reads "Entendio hun poquiello de la odiçepçon".

The earliest attempt to find an etymology for *moncluras* was made in the year 1779 by the first editor of the *Poema*, Tomás Antonio Sánchez, with the laconic comment "acaso de munire".[1] A little over a century later in 1890, the Italian Hispanist, Antonio Restori rendered the word as *laccio* without etymon.[2] Twentieth-century editors, such as Ramón Menéndez Pidal (1908), Pedro Salinas (1940), Alfonso Reyes (1944). Victor Oelschläger (1948) and Lesley Byrd Simpson (1957) all agree in the translation 'leather lacing or strap' and refrain from proposing an etymology.[3]

The clue to the meaning of *monclura* was given in Florencio Janer's *Vocabulario* to the *Cid*, in which he translates the noun as 'guarnición de arma'.[4] Since the word occurs in association with *yelmo* 'helmet', it would appear that the *moncluras* were some type of protective bands or straps binding the helmet to the shoulder hood of mail. Hence the standard, authoritative etymological dictionaries consistently interpret *monclura* as "la guarnición de una arma defensiva".[5]

[1] Tomás Antonio Sánchez, *Colección de Poesías Castellanas Anteriores al Siglo XV*, Vol. I (Madrid, 1779), reprinted by Florencio Janer in Vol. LVII of the *Biblioteca de Autores Españoles* (Madrid, 1864), revised edition (Madrid, 1952), 556.

[2] Antonio Restori, *La Gesta del Cid* (Milano, 1890), 234.

[3] Ramón Menéndez Pidal, *Cantar de Mio Cid*, Vol. II, Vocabulario (Madrid, 1908), revised edition, 1945, 763; Pedro Salinas, "*Poema del Cid*, Versión en romance moderno: texto antiguo según la edición crítica de Ramón Menéndez Pidal", *Las Cien Obras Maestras*, 3rd ed., (Buenos Aires, 1940), 285; Alfonso Reyes, "*Poema del Cid*: traducción moderna", reprinted through the courtesy of Espasa Calpe, Madrid, in Victor R. B. Oelschläger, *Poema del Cid in Verse and Prose* (New Orleans, 1948), 100; Lesley Byrd Simpson, *The Poem of the Cid* (Berkeley and Los Angeles, 1957), 137.

[4] *Op. cit. sup.*, 556.

[5] Martín Alonso, *Enciclopedia del Idioma*, Vol. II (Madrid, 1958), 2874; Roque Bárcia, *Primer Diccionario Etimológico de la Lengua Española*, Vol. III (Madrid, 1881), 804; *Diccionario Hispánico Universal*, Vol. I (Mexico, Inc., Editores, W. M. Jackson, 1962), 976; *Enciclopedia Universal Sopena: Diccionario Ilustrado de la Lengua Española*, Vol. VI (Barcelona, 1964), 5704; *Novísimo Diccionario de la Lengua Castellana por una sociedad de Literatos* (Paris, 1891), 617.

Obviously, any effort to find a fitting etymon for *monclura* through a process of etymological reconstruction requires a basic form that will satisfy the phonological changes which the word must experience in its development from Latin to Spanish. The medial consonant cluster *-cl* implies an original *-cul*, the vowel of which had undergone syncope, a common phenomenon in all periods of the Latin language. The Roman grammarian, Festus, who flourished about 150 B. C., quotes from the *Carmen Saliare*, a work of high antiquity, the archaic dative and ablative plural form *privicloes* for *priviculis*.[6] Plautine Latin is characterized by a generous use of diminutives in *-clus, -clum*. Cf. *periclum, poplum, saeclum, vehiclum, vinclum*.[7] Alongside of *-culus* < *-co-lo* Latin originally had another diminutive ending *-clus* < *tlo*. In time popular Latin assimilated *-tulus* to *-clus* and we find the fourth century *Appendix Probi* inveighing against the employment of *-clus* by emphasizing the correct *-tulus* ending in *capitulus* non *caplicus, vetulus* non *veclus, vitulus* non *viclus*.[8] These indictments were not limited to the *Appendix Probi*. Persius, writing in the first century, in Satire 5, line 13, has the word *sclopus*, usually appearing in the classical form *stloppus*.[9] The second-century grammarian, Flavius Caper writes *Martulus* non *Marculus*.[10] In Pelagonius, a fourth-century author of a treatise on veterinary medicine, we find *asclosus* < *astula* + *osus*.[11] The *Codex Theodosianus*, compiled in the fifth century, records *scuclatis* for *scutulatis*.[12] The Glosses show the same general tendency for the popular to prevail over the learned form. *Sicla* replaces *situla* and *fistula* is annotated as *vulgo fiscla dicitur*.[13]

The *-tl* to *-cl* change creates the ancestral type for later developments in the Romance languages, as can be observed from Provençal *usclar* < *ustulare*, Medieval Italian *sclopetare* < *scloppus* + *are*, Macedonian *puscle* < *pustula*, Latin *mukli* < *mutulus*.[14] These words have evolved as half-learned formations along the same phonological lines as *monclura*. Menéndez Pidal was of the opinion that the *Cid* contained Aragonese elements.[15] Indeed, *monclura* is analagous to such Aragonese nouns as *ascla* < *astula* and the toponymic *Monclús* < *monte clausu*.[16] *Ascla* is of

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[6] W. M. Lindsay, *The Latin Language* (Oxford, 1894), 403.

[7] See under individual word-entries; González Lodge, *Lexicon Plautinum*, (Lipsiae, 1904); Carolus Weise, *Lexicon Plautinum*, (Quedlinburgi, 1886); Veikko Väänänen, *Introduction au Latin Vulgaire* (Paris, 1963), 43-44.

[8] Henri F. Muller and Pauline Taylor, *A Chrestomathy of Vulgar Latin* (New York, 1932), 91.

[9] W. M. Lindsay, *The Latin Language* (Oxford, 1894), 307; H. Schuchardt, *Der Vokalismus des Vulgärlateins*, Vol. I (Leipzig, 1866), 160.

[10] Charles H. Grandgent, *An Introduction to Vulgar Latin* (New York, 1907), reprinted 1962, 284.

[11] Wilhelm Heraeus, *Zur Appendix Probi* in *Archiv für Lateinische Lexicographie*, I, 11 (Leipzig, 1900), 67.

[12] *Harper's Latin Dictionary* (New York, 1907), 1651.

[13] Wilhelm Heraeus, *Zur Appendix Probi*, in *Archiv für Lateinische Lexicographie* (Leipzig, 1900), 67, 303.

[14] See under individual word-entries: Wilhelm Meyer-Lübke, *Romanisches Etymologisches Wörterbuch* (Heidelberg, 1935); Gustav Körting, *Lateinisch-Romanisches Wörterbuch* (New York, 1923).

[15] Ramón Menéndez Pidal, *Cantar de Mio Cid*, Vol. I (Madrid, 1908), 75-76.

[16] Vicente García de Diego, *Manual de Dialectología Española* (Madrid, 1946), 247, 254.

wide diffusion in the Romania, occurring also in Gallego-Portuguese, Provençal, Catalan, Riojan and Navarrese.[17]

It is apparent, then, that the *-cl* of *monclura* may be traced back to Latin stem *muncul* or *muntul* plus the common suffix *-ura*. Now there is at hand the Late Latin noun *munitura* 'protection, fortification, leather apron',[18] for which we propose setting up the hypothetical diminutive *munitulura*. In popular parlance this would become, after the loss of the vowels *-i* and *-u* by syncope, the Vulgar Latin form *munclura*, which in turn would change its initial *-u* to *-o* and emerge as Hispanic Romance *monclura*. This phonological progression is in conformity with the evidence of the *Appendix Probi* mentioned above: *capitulus* non *capiclus*, *vetulus* non *veclus*, *vitulus* non *viclus*. On the basis of the available evidence, the derivation of *monclura* < Vulgar Latin *munitulura* supports the phonological development of the word and we may now render *las moncluras del yelmo* 'the protections or safeguards of the helmet'.

The other noun selected for discussion, *odiçepçon* is a very bizarre form. The reading *concepçion*, proposed by C. Carroll Marden in his Vocabulary to the *Libro de Apolonio*,[19] has no textual support from any of the known manuscripts and hence may be disregarded. The context in which the word appears is of some help, inasmuch as it tells us that the physician is in the act of listening to the heart of the seemingly moribund Luciana, for which the modern scientific medical term is auscultation. In the light of this information, *odiçepçon* reminds one of the Latin verb *audire* 'to hear' and the noun *captio* 'a taking'. Certainly, in Vulgar Latin outlandish forms are not unusual. The joining of a verb and a noun, both actually playing the part of verbal nouns, should not occasion undue surprise.

The verb with noun relationship is well-known in Romance constructions of the kind found in Spanish *cortabolsas* 'pick-pocket', *lavamanos* 'washstand' and Italian *guardaboschi* 'wood-ranger'. The type has also become very fertile in English in 'pick-pocket', 'cut-purse', 'break-water' and so on. These formations differ in the main from *odiçepçon* in that they appear to involve an implied subject and relative pronoun with the verb, so that a 'pick-pocket' is equivalent to 'one who picks pockets'.[20]

At any rate, the 'taking of a hearing' is literally what auscultation signifies to a physician. Line 300d, then, may be taken to mean 'he understood a little about auscultation'.

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[17] Vicente García de Diego, *Diccionario Etimológico Español e Hispánico* (Madrid, 1954), 607, Number 768.
[18] Alexander Souter, *A Glossary of Late Latin to 600 A. D.* (Oxford, 1949), 260; *Totius Latinitatis Lexicon Aegidii Forcellini*, Vol. IV(Prati, 1868), 201; *Harper's Latin Dictionary* (New York, 1907), 1177.
[19] C. Carroll Marden, *Il Libro de Apolonio*, Part II, *Grammar, Notes and Vocabulary* (Princeton, 1922).
[20] Ramón Menéndez Pidal, *Manual* (Madrid, 1944), 88, 2; Otto Jespersen, *Growth and Structure of the English Language*, (Garden City, New York, 1955), 181; W. M. Lindsay, *The Latin Language* (Oxford, 1894), 365, Number 90.

KENAN T. ERIM

THREE PORTRAITS FROM APHRODISIAS

HEAD OF A BOY, Late Julio-Claudian (Pl. I, 1-2)

Geyre Depot.

Inv. no. 63-600. Neg. no. E. R., I 58-59.
Found re-used in the ceiling of the southern underground galleries of the Baths of
Hadrian of Aphrodisias.
Coarse-grained white marble.
H. 0.27 m., W. 0.19 m., from chin to crown, 0.20 m.

Broken off at neck. Nose, rims of ears chipped off. Features somewhat blurred by
weathering. Where visible, original surface appears to have been highly polished.
Traces of discoloration on neck.

The head is that of a youth in his teens, wearing his hair in thick locks brushed forward
and falling fairly deeply over the neck. The tips of the hair framing the forehead form
a shallow arch. A tongue is noticeable above the right eye. Two short locks jut out
in front of either ear. The hair in the back is less carefully worked than that at the
front. The forehead is fairly low. The narrow eyes are wide-set and show thick upper
lids. Pupils and irises have not been plastically rendered. There is a slight drooping
line at the corners of the mouth. The cheeks are smooth and show little modelling.
The Julio-Claudian date of this portrait is apparent. Close parallels for some of its
details can be found in the head of the boy on the sarcophagus lid in the Museo
Nazionale in Rome which B. M. Felletti Maj dated convincingly in the reign of Nero.[1]
The loose locks in an arch-like frame about the face, the lips (though slightly less
'boudeur' in their expression) of the Rome head are reminiscent of the present portrait.

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[1] B. M. Felletti Maj, *Museo Nazionale Romano. I ritratti*, no. 121, pp. 71-72.

BUST OF A MAN, Trajan? (pl. II, 1-2).

Geyre Depot

Inv. nos. 65-224 and 65-513. Neg. no. E. R. I 76-78. Head found in the Baths of Hadrian of Aphrodisias at the entrance of the access tunnel located under the steps of the eastern portico or palestra. Bust unearthed in the central gallery or presumed *calidarium*.
Coarse-grained white marble.
H. Total 0.64 m.; chin to crown 0.25 m.; foot of bust 0.115 m.; W. Bust 0.40 m.; head (at level of eyes) 0.20 m.

Head broken off below chin. Nose, rims of ears, chin, eyebrows chipped. Minor chips on hair. Surface finely rubbed but incrusted. Oxydation with traces of burning in parts of bust, also chips. Piece of right shoulder missing. The bust is hollowed at the back and has a central support. It has a cylindrical foot with moulding at the top and bottom, and a hollow moulding curve in the center. The bust is nude, with a short chlamys draped on the left shoulder; a sword belt is diagonally pulled from the lower left to the upper right shoulder. The bust included the part of the chest just above the nipples.

The portrait is that of a man of mature years with a cleanshaven face and fairly long, wavy hair brushed forward on to the forehead and down to the nape of the neck. The locks on the crown of the head are arranged in a star-fish pattern. The tips of the locks framing the forehead form a fork above the right eye. The forehead is marked by two horizontal lines and a groove that, starting above the nose, bulges out on either side of it. The eyes are large, deep-set and have heavy lower lids and clear-cut upper ones. The eye-balls have been left smooth. There are flesh folds between the eyebrows and the upper lids, and crow's feet in the outer corners of the eyes. Slight swellings appear below the eyes.

The details of the face have been rendered with great realism. The cheek-bones are emphasized and the cheeks themselves are rather hollow. Deep grooves lead from the nostrils towards the corners of the mouth and from the latter to the chin. The mouth is small with slightly protruding lips firmly pressed together. There is a slight double-chin below the prominent jaw. In general, the flesh appears somewhat flabby, and the curving lines hard. The greyish incrustations, however, tend to accentuate such a sharpness of features.

This is not the portrait of a private citizen, but that of a person of high rank. as the type of bust — nude, with paludamentum and sword belt — shows. The form of the bust resembles closely that of Trajan in portraits that have, on the strength of his coinage, been connected with his decennalia.[2] The Aphrodisias bust is a little shorter

[2] Cf., *e.g.*, the bust in the Capitoline Museum, Galleria 30, Gross, *Bildnisse Trajans*, Pl. 15b, and the busts in the Vatican Museum, Sala dei busti 282 and Braccio Nuovo 48, Gross, Pl. 19a, b.

than those, but it shares with the busts of Trajan even a small detail such as the up-turned edge of the belt at its lower end. The hair style also resembles that of Trajan: for the arrangement of the tips of the locks above the forehead, compare, for instance, the portrait in Vienna;[3] the way the hair is brushed around the ears occurs in a similar manner on a head in Turin;[4] and the star-fish pattern at the back of the head and also the arrangement of the back hair in tiers can be found similarly on a portrait in the Lateran Museum.[5] Even the details of the facial features are comparable to those of Trajan, especially to a portrait in Oslo:[6] to be noted are the form of the eyes and the eyebrows; the crow's feet; the modelling of the cheeks and the area around the mouth; and even the shape of the mouth which is fuller than with most of the other portraits of Trajan. It seems possible, then, that the present bust is a portrait of the emperor himself.

HEAD OF A WOMAN, Second Half of the Fourth Century (pl. III, 1-2).

Geyre Depot.

Inv. no. 63-533. Neg. no. E. R., I 35-37.
Found near the northeast city wall, in a Byzantine quarter of area referred to as "Water Channel III."
Medium to coarse-grained white marble.
H. 0.295 m., W. 0.20 m., from chin to crown, 0.215 m.

Broken at neck. Nose missing. Chips on various parts of face and hair and around break. Incrustation and discoloration noticeable particularly on right part of face and head. Flesh parts finely rubbed. Vertical hole in center of crown, possibly to attach an ornament.

The subject is a youngish woman. Her hair is parted in the middle, brushed back and to the sides in gentle waves covering the ears in part. The waves framing the forehead and face are shown overlapping and crossing one another almost like a guilloche pattern. The hair is pulled to the back and presumably twisted into two strands or braids that are taken up and joined across the crown in the center. Below, the hair is simply brushed, while on the crown it is indicated in plain waves from the central parting, moving sideways and back on to the neck, passing under the knotted portion. Some wisps of curls are shown hanging on the nape of the neck. A rolled fillet or diadem separates the braids from the front waves and terminates in twisted snake heads. The forehead is smooth. The eyebrows are gently curved and indicated with

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3   Gross, Pl. 24.
4   Gross, Pl. 22b.
5   Gross, Pl. 26.
6   Gross, Pl. 27a.

incisions. The eyes have very heavy upper lids: the pupils are marked with almost circular drill-holes; the irises are incised as three-quarters of a circle. The glance is slightly to the right and a little upwards. The skin is smooth and barely modelled. The mouth is small, the full lips are slightly parted. There are faint swellings below the eyes.

Some of the hairstyles of fourth-century ladies, such as the present one, are based on Antonine coiffures. This has occasionally led to confusions and even controversy concerning their dates.[7] The front part of the hair of the present portrait is very similar, it is true, to the coiffures of Faustina the Younger or Lucilla.[8] But no Antonine hairdo shows a similar rendering at the back. This, however, does occur on a head from Nicomedia (now in Istanbul)[9] where the back hair is shown in a very similar fashion. The comparatively soft waves framing the forehead occur on a head from Kırşehir (also in Istanbul),[10] though they are not arranged in the same pattern. It seems virtually certain that the Aphrodisias head belongs to the fourth century: the almost total lack of modelling in the face, reminiscent of the portrait of Aelia Flacilla(?) in Copenhagen[11] points to the second half of the century rather than the Constantinian period.

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[7]   R. Calza in *Bolletino d'Arte*, XXXV, ser. IV, 1950, pp. 201-07, discussed these and related problems concerning a fourth-century female portrait statue from Ostia (perhaps Fausta) which she had originally dated to the second century because of the Antonine-looking coiffure. (R. Calza, *Museo Ostiense*, 1947, p. 8, n. 22; R. Calza-De Chirico, *Not. di Scavi*, 1941, pp. 234 ff).

[8]   Faustina the Younger: head in the Museo Capitolino, Imperatori 39 (M. Wegner, *Die Herrscherbildnisse in Antoninischer Zeit*, Pl. 34) Lucilla: head in Dresden (Skulpturensammlung 388) M. Wegner Pl. 47). Another fourth-century (but presumably Constantinian) portrait with a second hairstyle is in the Art Institute of Chicago collection. C. C. Vermeule identified the young lady with Constantia (*The Art Institute of Chicago Quarterly*, 54. 4, December 1961, pp. 6-10; M. Milkovich, *Roman Portraits*, 1961, p. 76, no. 34, and G. M. A. Hanfmann, *Roman Art*, 1964, p. 103, illus. p. 187, no. 98).

[9]   Inan-Rosenbaum, no. 91, pl. LVI, 3.

[10]   Inan-Rosenbaum, no. 295, p. CIXVII, 3-4.

[11]   F. Poulsen, *Ny Carlsberg Glyptotek Antika Skulpturer*, no. 773, pp. 522-523; recently illustrated by Vagn Poulsen, *Römische Bildwerke*, p. 90. Another fourth-century head (*ca.* 320-340) in Copenhagen (F. Poulsen, no. 552, pp. 379-381) was attached to an earlier Trajanic body. B. M. Felletti Maj in *Critica d'Arte*, VI, 1941, pp. 74-90, discusses this last specimen as well as other fourth-century female portraits. A head in Padua (Museo Civico), published in *J.d.I.*, 53, 1938, pp. 627-628, belongs to the same group and even bears some resemblance to ours. The Aphrodisias head was among the items of the Art Treasures of Turkey exhibition circulated by the Smithsonian Institution in the United States in 1966-1968. Catalogue, *Art Treasures of Turkey*, no. 151, p. 94.
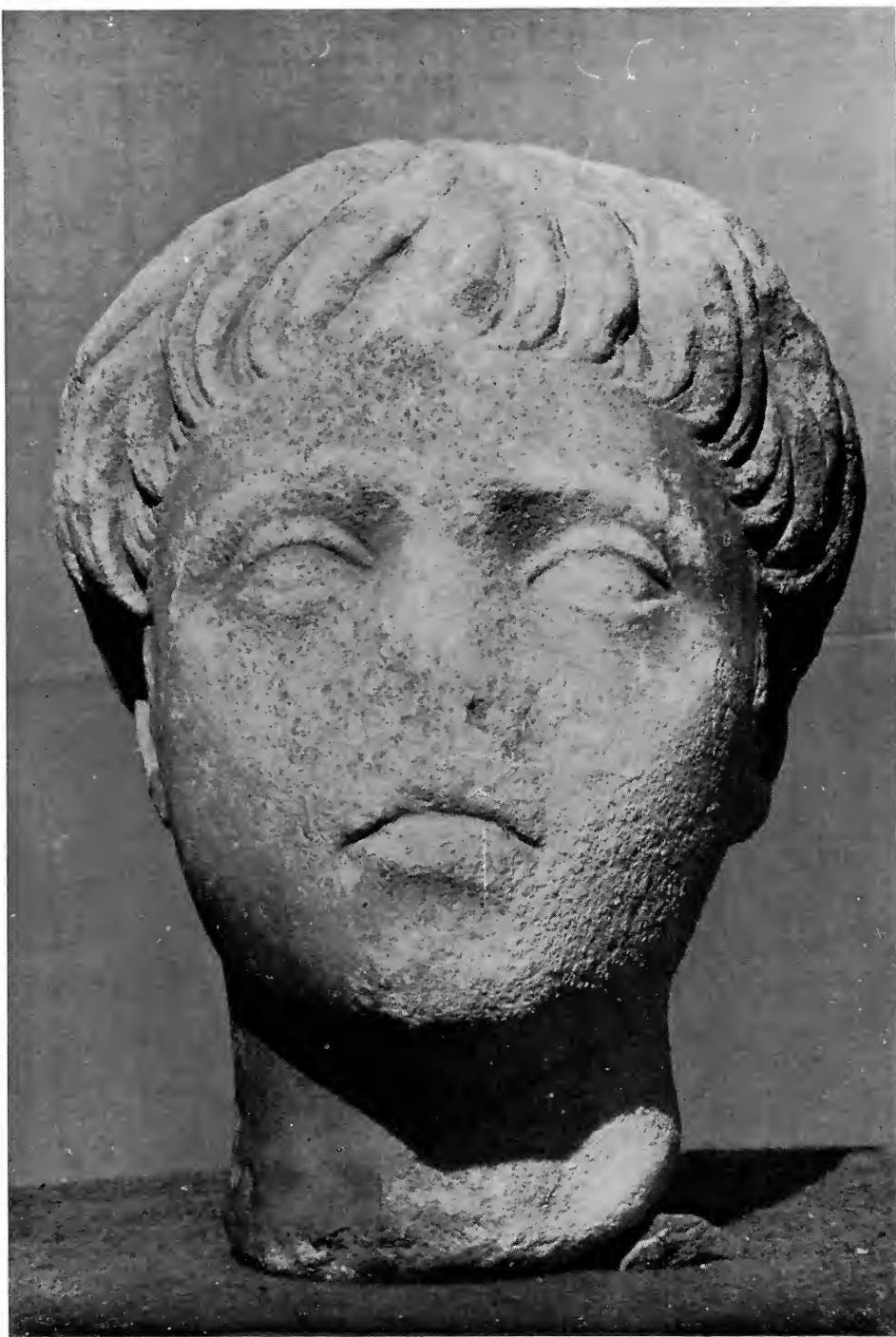
Pl. I, 1.   Head of a Boy. Late Julio-Claudian.

Pl. I, 2. Head of a Boy. Late Julio-Claudian.

Pl. II, 1.   Bust of a Man, Trajan?
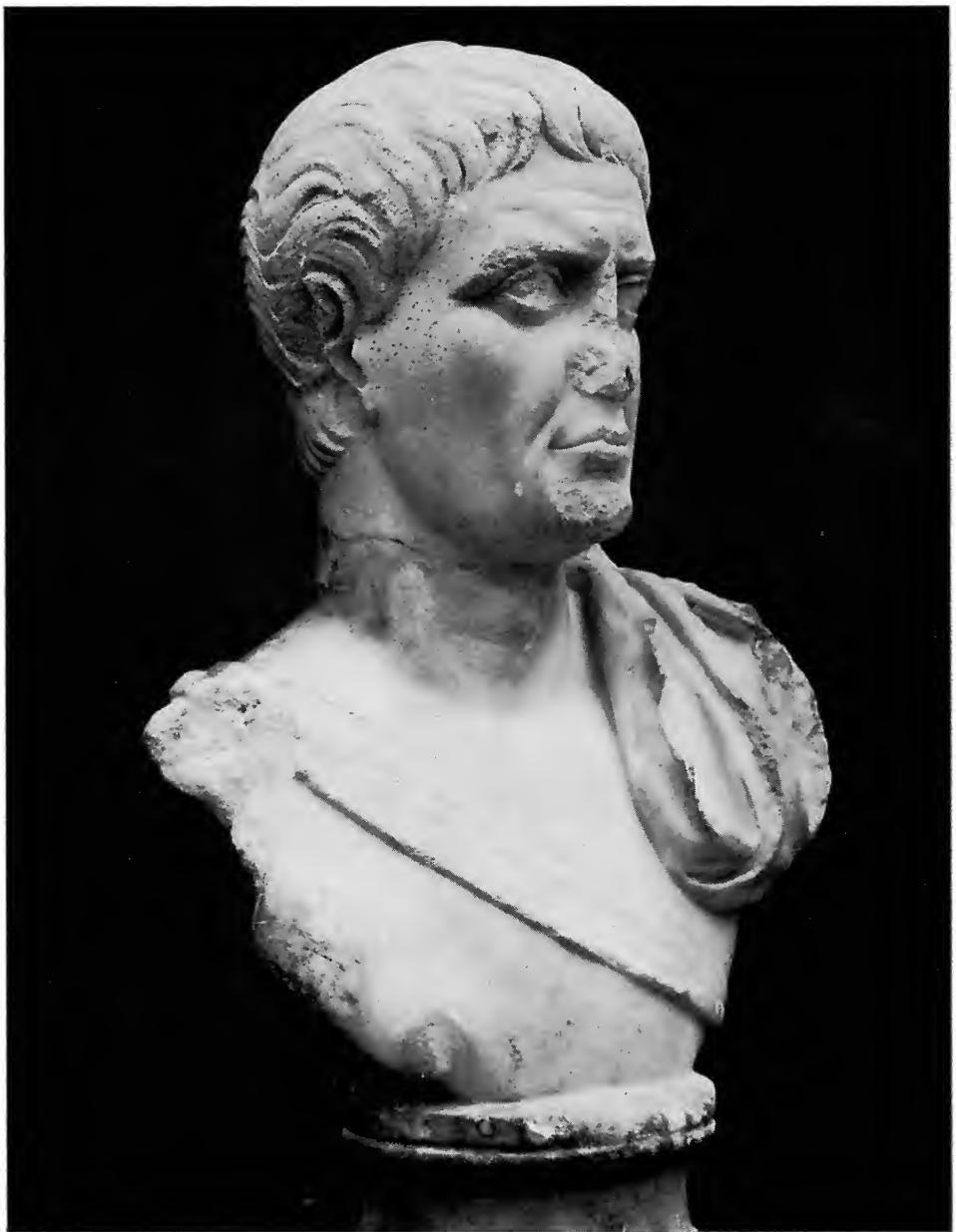
Pl. II, 2. Bust of a Man, Trajan?

Pl. III, 1.   Head of a Woman. Second Half of the Fourth Century.
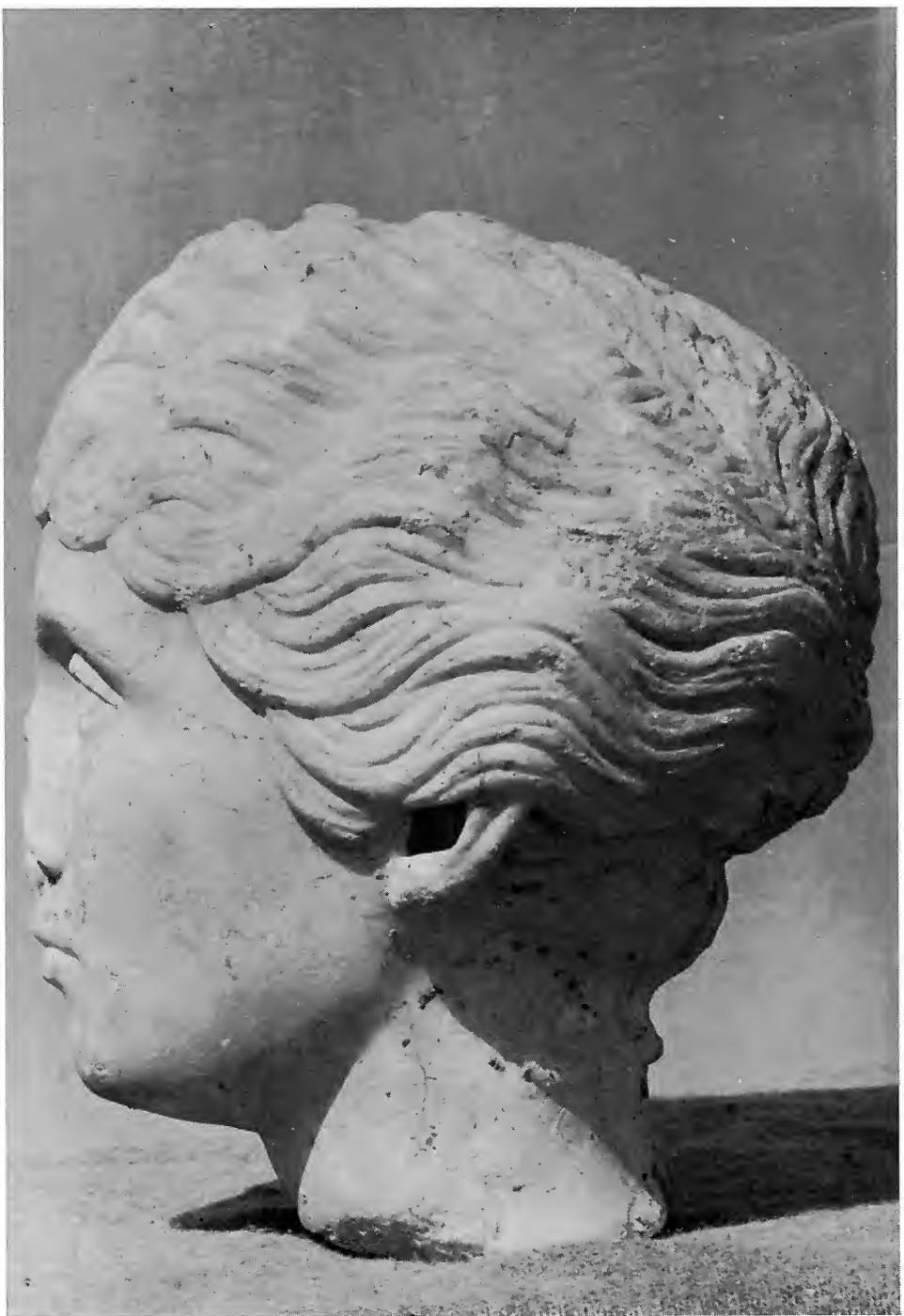
Pl. III, 2.   Head of a Woman. Second Half of the Fourth Century.

PAUL FORCHHEIMER

PRIMITIVE LANGUAGE(S)

When the scope of philology was widened by the study of languages other than Indo-European and Semitic, an era of informed speculation began. In line with the then prevalent trend in other disciplines, and often based on incomplete information and biased selection of examples, the various types of language became identified with developmental stages in either regular cycles or on an evolutionary scale. Certain languages of societies with a primitive culture were called primitive. While even Humboldt subscribed to this view, Von Der Gabelentz already broke with it. It was soon realized that there is no language of which we have adequate knowledge that does not dispose of a fully fledged grammatical apparatus in addition to an extensive vocabulary to express precisely anything the speaker cares to communicate. In such a case as Tasmanian, what is really underdeveloped is our knowledge of the language. As a consequence, modern texts on linguistics do not at all refer to 'primitive' languages.

While most scholars have reduced speculation about the origin and early stages of language to an occasional extra-curricular game, there have still been outstanding linguists, e.g. Jespersen[1] and Van Ginneken,[2] who have been prompted by their evolutionist outlook to invent a neat theory of language genesis. As an example of an admittedly prejudiced approach in this field I should like to quote in translation Arthur Ungnad,[3] a respected scholar, whose grammars are still used by students as standard texts:

The spirit of a nation gains visible expression in language. The evolution of the human intellect, which is, of necessity, epistemologically postulated, forces us to assume that nations that have lived more than five thousand years ago have felt and thought more primitively. Their language must, therefore, have been much simpler than ours. So far the existing investigations of the nature of the Semitic idiom did not give that impression. For this reason the present essay is moving in a different direction: It assumes a priori

[1] Otto Jespersen, *Language* (London, 1922), pp. 412 ff.
[2] Jacobus Van Ginneken, *Études phonologiques dédiées à la mémoire de M. le Prince N. S. Troubetzkoy* (Prague, 1939), pp. 233-61.
[3] Arthur Ungnad, *Das Wesen des Ursemitischen* (Leipzig, 1935), p. 5.

a more primitive disposition of the Semites of old and aims at demonstrating that they have given expression to their thoughts with rather simple means.

Before we attempt to answer the question whether or not we can distinguish primitive and progressive features in language, we should establish a clear definition of these terms as applicable to the work of the human mind in general. Once we have found a workable, objective definition, we can then see whether or not it also fits language.

For simple and clear illustrations of the principle I want to demonstrate, we may first turn to mathematics. Given the formula for the area of a trapezoid: $A = \dfrac{a + b}{2} \times h$, we can easily derive the formula for the area of a triangle if we consider the triangle a trapezoid one of the bases of which has shrunk to zero: $A = \dfrac{O + b}{2} \times h$, or simply: $\dfrac{b}{2} h$. Now we have condensed two formulae into one. Similarly, several theorems in Euclidian geometry can be combined easily if we consider a tangent a secant the chord of which has become zero. Such a procedure not only stimulates aesthetic pleasure, it also simplifies our knowledge and makes it more systematic. This is the way human knowledge has grown from the early days. The ultimate dream of modern science is the finding of a unified field theory that will reduce all physical phenomena to manifestations of one basic law. From times immemorial the trend in human intellectual history has been to connect discrete observations and to reduce the number of deductive laws to fewer, more embracing ones. It is basic to all progress in civilization. (Whether or not moral progress could also be aligned remains outside the scope of this paper.) The definition of progress as shown here is not only one of cold theory. As already mentioned, it is also sensed aesthetically. Connecting observations gives us a feeling of satisfaction even in cases where no objective end whatever is served, e.g. when we have discovered a certain similarity between two people we meet in different places in different functions. If we find out, by chance, that these two people are, indeed, cousins, we feel somehow relieved and enjoy the fact that our discovery of common features is backed by a genealogical connexion. It simplifies our knowledge of the world around us, although it has no practical bearing on our own affairs. Again, an old farmers' rule tells that swallows flying low presage rain. Today, we consult the barometer. If we then learn that falling air pressure stimulates flies to fly lower, and that swallows, which feed on flies, follow them, we experience once more a certain satisfaction.

As our next step we have to examine changes in language and to establish whether or not any of them could be identified with what, in the light of the above, can be called progressive. These changes occur on three different planes: phonetically, grammatically, and in vocabulary and meaning. Thus we would best consider each field by itself. First, however, let us examine how such developments manifest themselves in language.

The general trend in nature from the less likely to the more likely, known as levelling or entropy, is also a strong force in language. As elsewhere, the progress is constantly

obscured by the fact that levelling in one area often causes new differentiation in another one. Thus phonetic levelling can cause grammatical irregularities, while grammatical analogy produces new sequences of phonemes. As language serves communication, there is a natural limit for levelling, i.e. a minimal need for clear distinctions to allow unambiguous expression of all necessary semantic and grammatical ideas. Within this limit, the law of the least effort is working to its full extent.

Sound changes are the most regular ones in language. The phonetic description of any speech pattern, regardless of the culture of its speakers, shows neat grouping of phonemes into systems of oppositions. Due to the technical physiological processes of sound production, combining phonemes into morphemes is quite different from combining letters in a typescript. The organs must be constantly realigned. As this often happens only imperfectly, especially in fast, normal speech, sounds are assimilated to the preceding or following ones. As this leads to phonetic changes, new combinations arise in this way as well as through grammatical and formative processes. These, in turn, lead to further changes. The pattern is one of constant, slow, systematic change. We could only claim progress here if a more economical system would evolve. This would have to maintain or increase the number of meaningful, convenient, distinct morphemes while reducing the number of phonemes used (i.e. unless, concurrently, other developments would make the available morphemes serve for more expressions of distinct meaning. If the mere number of phonemes were taken as a criterium, Hawaiian would be higher on the scale of progress than Arabic!) Martinet[4] seems to believe that the idea of progress can be applied to phonetic change. At the present stage this writer would prefer rather to leave this question open for the time being.

Grammar, on the other hand, is a field where many scholars concur that progress can be clearly demonstrated. Jespersen's[5] exposition is almost generally accepted here, and Bonfante[6] has established an interesting list of one-way developments, all or most of which seem to fit the requirements for progress. The law of the least effort or of the greatest economy is working here as analogy to reduce the number of different processes serving the same purpose, and as analysis, which substitutes syntactic means for paradigmatic ones, resulting once more in fewer distinctive forms and in shorter words. Yet, as Jespersen claims, it allows even finer shades of distinction. Examples for the first process would be the change of inherited strong Germanic verbs to innovated weak ones, the loss of dual, the loss or reduction of gender, or the levelling of the many Latin plural formations to all vowel change in Italian or all s-suffixes in French and Spanish. Examples of analysis would be our compound tenses and passive voice, the replacement of person-affixes by free pronouns, or the replace-

[4] André Martinet, *Économie des changements phonétiques* (Berne, 1955), *Idem, A Functional View of Language* (Oxford, 1962), pp. 134-60.
[5] Otto Jespersen, *Op. cit.*, pp. 319 ff., also *Progress in Language with Special Reference to English* (1894).
[6] Giuliano Bonfante, "Semantics", *Cyclopedia of Psychology*, (New York, 1949).

ment of case formation by prepositions. Such changes, labelled 'progressive' by Jespersen, are very well in harmony with our definition of progress in human intellectual history. They make language an easier instrument to handle. In this sense, then, a judgment of value is plainly justified. It should, however, not imply that a more 'progressive' language can do more than a primitive one. Any language can express anything, and all languages must add to their resources to express new ideas.

The third and most complicated field for our study is that of vocabulary and semantics. After examining current thought in this field we shall have to propose a new approach. It is generally stated that progressive languages have proportionately more abstract words than primitive ones. As far as semantic change is concerned we witness developments in both directions. On balance more changes may occur from concrete to abstract meaning. People who have really made a thorough study of 'primitive' languages have found that they are fully capable of expressing abstract ideas, though they may have less occasion to do so. The language, as a tool, is quite adaptable, as has been well explained in the introduction to Strehlow's[7] Aranda Grammar. Statistical observations in this respect testify to the primitive state of the speaker rather than to the nature of the language.

Again, we are often told how concrete, picturesque and telling the idioms of primitive languages are. Actually, not being too well conversant with these languages, we translate every vocable in every idiom and analyse it. If we ever stopped to do the same to our own tongue, following up every etymology, we would be in for some surprises. In practice, the literal meaning of what we say hardly ever occurs to us, only its meaning in context. Why not measure the primitive with the same rule?

The crux of the primitive or progressive nature of the vocabulary of a language would then, again, consist of its economy and systematic nature. An ideal state, even more so than in Linné's nomenclature, would be exemplified by the terminology of organic chemistry.

We are often told that the many words an Eskimo distinguishes for various aspects of snow contrast as primitive with our systematic use of the word *snow* with various qualifiers. How do we then account for the many words we have for water (*puddle, pond, lake, sea, drizzle, rain, shower, downpour, stream, creek, brook, river,* etc.)? With its many historic sources, English has an extremely rich, unwieldy and unsystematic vocabulary. As 'progressive' as English grammar can be called, as 'primitive' is its vocabuláry, e.g. *guilty — innocent* (cp. Fr. *coupable — innocent,* but G. *schuldig — unschuldig*), *old — age* (cp. G. *alt — Alter*), *near — vicinity — approach* (cp. G. *nahe — Nähe — sich nähern*) etc. To a great, but varying extent other Western languages, and languages in general, share this feature for various historic reasons, but some are more systematic and, therefore, more economical than others.

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[7] Theodor Georg Heinrich Strehlow, "An Aranda Grammar", *OCEANIA Monograph* (Sydney, N.S.W., 1944).

On the other hand, if Latin, like other older Indo-European languages, lacked a neutral pronoun for the third person nominative, and thus forced the speaker to commit himself to greater specification than he might have needed, by presenting him with a choice of demonstratives, then the development in modern Romance tongues of an equivalent of our 'he', 'she' or 'it' is progress. (In due justice to Latin it must be said, however, that there was much less need for a subject form of the third person pronoun, as it was normally understood when a verb was used in the third person.) Similarly, many North-Western American Indian languages (e.g. Kwakiutl and Bella-Bella) make it mandatory, when referring by pronoun to a third person, to specify whether or not he or she is visible, and whether near or far. While we are not forced to specify these aspects, we can, of course, do so if it is needed for our communication. On the other hand, a speaker of English must specify sex in the pronoun, where a Turk need not do so. In this context we can also understand why the formation of a definite article by weakening a demonstrative, one of the one-way developments listed by Bonfante, belongs here.

Similarly to have names for many plants, animals and foods, but no general word for plant, animal or food, may be considered primitive. But often investigators draw rash conclusions by overlooking certain words so used, and by not giving enough weight to different, equally valid systematic classifications closer to the need of the speakers. English has *cow, ox, bull, steer* and *calf*, but no general name for *bos taurus* like German *Rind*, except for the collective *cattle*.

A new distinction I should like to introduce here is that of closeness (concern) and distance (aloofness). Just as a strategist can survey the front better from a distance, we are all more objective where we are not closely involved. At a distance the common features stand out better, while at close range the distinguishing features prevail. Thus, what to an outsider are merely brothers, are at the family table three distinct individuals: *Tom, Dick* and *Harry*. What to a casual observer are merely hooks of varying sizes and curvatures, and thus described, are to the artisan, technician or scientist who uses them regularly instruments with distinctive names, thought of as completely different items. Again, there are many more names for the young and old, male and female and otherwise different farm animals, often unknown to the city-dweller, than we have for animals we are less in contact with. And if the afore-mentioned organic chemistry offers such a fine, systematic terminology, we also find that compounds in frequent use or of special interest are more often referred to by abbreviations, 'nick-names', or ordinary words.

This observation has a parallel in laws and formulae, e.g. in the geometric formulae mentioned earlier, even if we realize that several of them can be condensed into one. For practical purposes we still use them all and may even add special formulae to simplify special routine applications if we are sufficiently concerned with them. The principle is really the same one here and there.

Since such different levels exist in every language, rather than to refer to primitive languages we might refer to primitive situations which call for a primitive vocabulary.

This may apply to the most advanced science as well as to any other 'close' situation. In this new definition the term 'primitive' appears to have definite validity.

So far, our analysis seems to indicate only that language is subject to the physical law of levelling, of moving from the less likely to the more likely, and thus toward greater uniformity. In a way this seems disturbing. Language is a manifestation of organic life, and organic life, as opposed to inorganic nature, seems to be moving, on the contrary, from the more likely to the less likely.[8]

Such a trend toward diversification and against uniformity is, indeed, likewise evident in language. With all living nature language is subject to the physical laws, and yet it also partakes by contrast of the manifestations of life. To come closer to an explanation of this thesis, I should like to refer here in a few words to Bergson's theory of what is comical.[9]

Henri Bergson calls attention to the fact that life is constant change and constant adaptation. Any conduct of a living creature that seems to be lacking in this constant adaptation, and thus reminding of a mechanism, brings out what he calls the "social corrective measure" of laughter. One instance of this would be illustrated by mechanical repetition. The use of pet expressions, repetition of one's own sayings or of cliches, and similar linguistic reactions, which seem to deny change and to lack adaptation, are felt as comical. Inspite of all basic similarities, every human being has his own peculiar make-up of protoplasm and his own personality so that no two beings are alike. But, likewise, no one being is exactly the same at different times in his life. Inspite of the fact that in every language and dialect the number of phonemes is relatively small, as is also the number of possible combinations of phonemes, and inspite of the limited vocabulary and the rigid rules of grammar on every level of speech, every language and dialect still permits an infinite number of sentences to express everything to be communicated specifically and clearly. Notwithstanding these limitations and the growing simplification of grammar, and in full compliance with them, every individual develops his own style. And even in our own style, and within the rigid system, we construct continually new sentences and avoid any such repetitiousness as would make us ridiculous. Yet this variety, practically postulated by organic life, is perfectly compatible with the trend toward greater regularity which spells progress in language.

[8]   P. Lecomte de Nouy, *Human Destiny* (London & New York, 1947) (also Signet 1949).
[9]   Henri Bergson, *Le Rire. Essai sur la signification du comique* (Paris, 1932).

LEONARD FOX

OBJECTIVE CONJUGATIONS
IN NORTH AND SOUTH CAUCASIAN

Among the verbal systems of the world's languages, those of the Caucasus present a number of features of great linguistic interest. One such feature, the so-called 'objective' or 'incorporating' conjugation, a widespread phenomenon among non-Indo-European languages,[1] attains perhaps its highest degree of complexity in the linguistic family of the North-West Caucasus, comprising Abkhaz, Circassian and Ubykh. South Caucasian (i.e. Georgian, Mingrelian, Laz and Svan) has this type of conjugation, but in a much more limited degree. Implicit in the objective structure are various pronominal affixes representing subject, direct object and indirect object, as well as certain prepositional forms in some cases. These are attached to a verbal root in a fixed order, which seems to be remarkably similar in many languages possessing this type of verbal structure. By way of introduction to the more closely analyzed Georgian and Circassian forms, the examples below are given to exhibit the structure under consideration as found in non-Caucasian languages.

1. Gagadu[2] ore: gara 'see': present   *Subject*

Dir. Obj.	Sg.1	Sg.2
Sg.1		ŋ un-ore:gara
Sg.2	b-ore:gara	
Sg.3 masc.	g-ore:gara	n-ore:gara
Du.1 masc.		ŋun-ore:gara-mana
Du.1 fem.		ŋun-ore:gara-ndja
Du.2 masc.	b-ore:gara-mana	

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[1] Among Indo-European languages, there appear to be remnants of this type in Celtic, particularly Old Irish, where such forms occur as *selgus* 'he cut them down' and *ainsium* 'may he protect me'. Cf. R. Thurneysen, *A Grammar of Old Irish* (Dublin, 1946), §429 ff.

[2] An Australian 'prefixing' language. See A.A. Capell, "Languages of Arnhem Land, North Australia", in: *Oceania*, Vol. 12, 1942.

1 Continued:

Dir. Obj.	Sg. 1	Sg. 2
Du.2 fem.	b-ore:gara-ndja	
Du.3 masc.	g-ore:gara-mana	n-ore:gara-mana
Du.3 fem.	g-ore:gara-ndja	n-ore:gara-ndja
Pl.3 masc.	g-ore:gara-da	n-ore:gara-da
Pl.3 fem.	g-ore:gara-mba	n-ore:gara-mba

2. Burušaski[3] *-dɛlʌs 'strike': present.

Subject

Dir. Obj.	Sg.1	Sg.2	Sg.3 m.	Sg.3 f.	Sg.3 x.	Sg.3 y.
Sg.1		adɛlja	adɛljai.i	adɛlju bo	adɛlji bi	adɛlji bi'la
Sg.2	gvdɛlja ba		gvdɛljai.i	gvdɛlju bo	gvdɛlji bi	gvdɛlji bi'la
Sg.3 m.-x.[4]	idɛlja ba	idɛlja	idɛljai.i	idɛlju bo	idɛlji bi	idɛlji bi'la
Sg.3 f.	mudɛlja ba	mudɛlja	mudɛljai.i	mudɛlju bo	mudɛlji bi	mudɛlji bi'la
Pl.1		midɛlja	midɛljai.i	midɛlju bo	midɛlji bi	midɛlji bi'la
Pl.2	madɛlja ba		madɛljai.i	madɛlju bo	madɛlji bi	madɛlji bi'la
Pl.3 m.-f.-x.	udɛlja ba	udɛlja	udɛljai.i	udɛlju bo	udɛlji bi	udɛlji bi'la

3. Basque[5] ekarri 'carry': present.

Direct Object

Sub.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1		z-akar-t	d-akar-t		z-akar-te-t	d-akar-zki-t
Sg.2	n-akar-zu		d-akar-zu	g-akar-zu		d-akar-zki-zu
Sg.3	n-akar	z-akar	d-akar	g-akar	z-akar-te	d-akar-zki
Pl.1		z-akar-gu	d-akar-gu		z-akar-te-gu	d-akar-zki-gu
Pl.2	n-akar-zu-te		d-akar-zu-te	g-akar-zu-te		d-akar-zki-zu-te
Pl.3	n-akar-te	z-akar-te	d-akar-te	g-akar-te	z-akar-te-e	d-akar-zki-te

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[3] See D.L.R. Lorimer, *The Burushaski Language*, Vol. 1 (Oslo, 1935).

[4] Lorimer uses 'x' to represent non-human animates and certain inanimates; 'y' represents all other inanimates.

[5] See H.P. Houghton, *The Verb in Guipuzcoan Basque* (Charlottesville, n.d.).

3a. Basque ekarri 'carry': present.

Indirect Object

Sub. + D.O.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1 Sg.3		d-akar-zu-t	d-akar-kio-t		d-akar-zu-te-t	d-akar-kio-te-t
Sg.1 Pl.3		d-akar-zki-zu-t	d-akar-z-kio-t		d-akar-zki-zu-te-t	d-akar-z-kio-te-t
Sg.2 Sg.3	d-akar-da-zu		d-akar-kio-zu	d-akar-gu-zu		d-akar-kio-te-zu
Sg.2 Pl.3	d-akar-zki-da-zu		d-akar-z-kio-zu	d-akar-zki-gu-zu		d-akar-z-kio-te-zu
Sg.3 Sg.3	d-akar-da-t	d-akar-zu	d-akar-kio	d-akar-gu	d-akar-zu-te	d-akar-kio-te
Sg.3 Pl.3	d-akar-zki-t	d-akar-zki-zu	d-akar-z-kio	d-akar-zki-gu	d-akar-zki-zu-te	d-akar-z-kio-te
Pl.1 Sg.3		d-akar-zu-gu	d-akar-kio-gu		d-akar-zki-te-gu	d-akar-kio-te-gu
Pl.1 Pl.3		d-akar-zki-zu-gu	d-akar-z-kio-gu		d-akar-zki-zu-te-gu	d-akar-z-kio-te-gu
Pl.2 Sg.3	d-akar-da-zu-te		d-akar-kio-zu-te	d-akar-gu-zu-te		d-akar-kio-te-zu-te
Pl.2 Pl.3	d-akar-zki-da-zu-te		d-akar-z-kio-zu-te	d-akar-zki-gu-zu-te		d-akar-z-kio-te-zu-te
Pl.3 Sg.3	d-akar-da-te	d-akar-zu-te	d-akar-kio-te	d-akar-gu-te	d-akar-zu-e-te	d-akar-kio-te-e
Pl.3 Pl.3	d-akar-zki-da-te	d-akar-zki-zu-te	d-akar-z-kio-te	d-akar-zki-zu-e-te	d-akar-zki-zu-e-te	d-akar-z-kio-te-e

The affix order of the foregoing examples is as follows: (S = subject, SP = pluralizing particle for subject, DO = direct object, IO = indirect object, OP = pluralizing particle for object, R = verbal root).

Gagadu: S—DO+R+OP
Burušaski: DO+R+S
Basque: DO+R(+OP)(+IO)+S(+SP)

Of the incorporating abilities of the Georgian verb, Tschenkeli[6] says:

Das georgische Verb unterscheidet sich im ausdruck der Person grundlegend von den Verben der indoeuropäischen Sprachen, wo das Verb jeweils nur eine einzige Person ausdrückt, nämlich die handelnde bei aktiven oder die leidende bei passiven Verben, also das Subjekt.

Im Georgischen dagegen kann das Verb ausser dem Subjekt noch ein direktes oder ein indirektes Objekt oder beides zusammen im Verbkörper selbst einschliessen. Das georgische Verb ist also in den meisten Fällen *polypersönlich*, d.h. vielpersönlich oder mehrpersönlich.

Das georgische Verb kann *ein*persönlich, *zwei*persönlich oder sogar *drei*persönlich sein, d.h. es können in einer Verbform gleichzeitig eine, zwei oder auch drei verschiedene Personen zum Ausdruck kommen. Dies geschieht mittels der sogenannten pronominalen Partikeln oder Personalzeichen, welche an das Verb angegliedert werden.

The 'polypersonality' of the Georgian verb, however, is defective in the same sense as, for example, the Basque forms presented above, in that neither language may incorporate all persons as direct or indirect object, but must have recourse to auxiliary pronouns. This is not the case in Circassian where, in the spoken language, auxiliaries are commonly employed for the sake of clarity, but are, strictly speaking, unnecessary, as the nature of the language is such that it may easily incorporate all persons for whatever grammatical purposes required.

The auxiliaries employed in the examples below are *mas* and *mat'*, the third person pronoun singular and plural, respectively (there is no gender distinction in Georgian personal pronouns: *mas* = him, her, it), in the dative/accusative case.[7]

The affix order for Georgian is: (DO), (IO)+R+S+(SP),(OP).

Georgian xatva 'paint': present.

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[6]   K. Tschenkeli, *Einführung in die georgische Sprache*, Bd. 1 (Zürich, 1958).

[7]   In Georgian, the direct object and indirect object of a verb in the primary tenses are both placed in the dative/accusative case; in the secondary tenses the direct object is in the nominative and the indirect object in the dative/accusative.

Direct Object

Sub.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1		g-xatav	v-xatav (mas)		g-xatav-t'	v-xatav (mat')
Sg.2	m-xatav		xatav (mas)	gv-xatav		xatav (mat')
Sg.3	m-xatav-s	g-xatav-s	xatav-s (mas)	gv-xatav-s	g-xatav-t'	xatav-s (mat')
Pl.1		g-xatav-t'	v-xatav-t' (mas)		g-xatav-t'	v-xatav-t' (mat')
Pl.2	m-xatav-t'		xatav-t' (mas)	gv-xatav-t'		xatav-t' (mat')
Pl.3	m-xatav-en	g-xatav-en	xatav-en (mas)	gv-xatav-en	g-xatav-en	xatav-en (mat')

With an indirect object, e.g. 'he paints (it, them) for me', *mas* or *mat'* (it, them) must be interpolated after every form, in order to make them tri-personal.

Indirect Object

Sub.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1		gi-xatav	v-u-xatav		gi-xatav-t'	v-u-xatav
Sg.2	mi-xatav		u-xatav	gvi-xatav		u-xatav
Sg.3	mi-xatav-s	gi-xatav-s	u-xatav-s	gvi-xatav-s	gi-xatav-t'	u-xatav-s
Pl.1		gi-xatav-t'	v-u-xatav-t'		gi-xatav-t'	v-u-xatav-t'
Pl.2	mi-xatav-t'		u-xatav-t'	gvi-xatav-t'		u-xatav-t'
Pl.3	mi-xatav-en	gi-xatav-en	u-xatav-en	gvi-xatav-en	gi-xatav-en	u-xatav-en

Obviously, where confusion must result because of exact correspondences of forms (as when Pl.2 is used as direct or indirect object), other pronouns besides *mas* and *mat'* are required.

The objective conjugations in Circassian are of several types.[8] Following Dumézil,[9] with modifications, these types may be classed as follows:

1. Verbs with direct object.
2. Verbs with direct and indirect object.
3. Intransitive verbs with prepositional affix and indirect object.
4. Verbs with prepositional affix and direct object.
5. Verbs with prepositional affix, direct object and one or two indirect objects.

The pronominal affixes used in the Circassian objective conjugation are of three degrees of length: long, short and very short. The lengths vary depending upon whether the pronouns are used as subjects, direct object or indirect object; whether they are used in one type of conjugation or another; and whether the verb is in one of the primary or secondary tenses. In the following examples (which are all in the Adyghe dialect) the length of each member of the verbal complex is indicated in the structural pattern.

[8] See M.A. Kumakhov, "Adygeiskii yazyk", in E.A. Bokarev, et al. *Iberiisko-kavkazskie yazyki* (Moscow, 1967).
[9] G. Dumézil & A. Namitok, *Fables de Tsey Ibrahim* (Paris, 1938).

TYPE 1: DO (short)+S (long in present indicative)+R. λeγu- 'see': present.

Direct Object

Sub.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1		wu-se-λeγu	se-λeγu		sᵒə-s e-λeγu	se-λeγu-x
Sg.2	sə-we-λeγu		we-λeγu	tə-we-λeγu		we-λeγu-x
Sg.3	s-ye-λeγu	w-ye-λeγu	ye-λeγu	t-ye-λeγu	sᵒ-ye-λeγu	ye-λeγu-x
Pl.1		wu-te-λeγu	te-λeγu		sᵒə-te-λeγu	te-λeγu-x
Pl.2	sə-sᵒe-λeγu		sᵒe-λeγu	tə-sᵒe-λeγu		sᵒe-λeγu-x
Pl.3	s-a-λeγu	w-a-λeγu	a-λeγu	t-a-λeγu	sᵒ-a-λeγu	a-λeγu-x

TYPE 2: DO (short)+IO (long)+S (long in present)+R (+OP). tə- 'give': present.

Indirect Object

Sub. D.O.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1 Sg.2			w-ye-se-tə			w-ya-se-tə
Sg.1 Sg.3		we-se-tə	ye-se-tə		sᵒe-se-tə	ya-se-tə
Sg.1 Pl.2			s-ye-se-tə			sᵒ-ya-se-tə
Sg.1 Pl.3		we-se-tə-x	ye-se-tə-x		sᵒe-se-tə-x	ya-se-tə-x
Sg.2 Sg.1			s-ye-we-tə			s-ya-we-tə
Sg.2 Sg.3	qə-se-we-tə		ve-we-tə	qə-ta-we-tə		ya-we-tə
Sg.2 Pl.1			t-ye-we-tə			t-ya-we-tə
Sg.2 Pl.3	qə-se-we-tə-x		ye-we-tə-x	qə-ta-we-tə-x		ya-we-tə-x
Sg.3 Sg.1		sə-qə-w-ye-tə	sə-r-ye-tə		sə-qə-sᵒ-ye-tə	s-ar-ye-tə
Sg.3 Sg.2	wu-qə-s-ye-tə		wu-r-ye-tə	wu-qə-t-ye-tə		w-ar-ye-tə
Sg.3 Sg.3	qə-s-ye-tə	qə-w-ye-tə	r-ye-tə	qə-t-ye-tə	qə-sᵒ-ye-tə	r-a-tə
Sg.3 Pl.1		tə-qə-w-ye-tə	tə-r-ye-tə		tə-qə-sᵒ-ye-tə	t-ar-ye-tə
Sg.3 Pl.2	sᵒə-qə-s-ye-tə		sᵒ-r-ye-tə	sᵒə-qə-t-ye-tə		sᵒ-ar-ye-tə
Sg.3 Pl.3	qə-s-ye-tə-x	qə-w-ye-tə-x	r-ye-tə-x	qə-t-ye-tə-x	qə-sᵒ-ye-tə-x	r-a-tə-x
Pl.1 Sg.2			w-ye-te-tə			w-ya-te-tə
Pl.1 Sg.3		we-te-tə	ye-te-tə		sᵒe-te-tə	ya-te-tə
Pl.1 Pl.2			sᵒ-ye-te-tə			sᵒ-ya-te-tə
Pl.1 Pl.3		we-te-tə-x	ye-te-tə-x		sᵒe-te-tə-x	ya-te-tə-x
Pl.2 Sg.1			s-ye-sᵒe-tə			s-ya-sᵒe-tə
Pl.2 Sg.3	qə-se-sᵒe-tə		ye-sᵒe-tə	qə-te-sᵒe-tə		ya-sᵒe-tə
Pl.2 Pl.1	qə-se-sᵒe-tə-x		t-ye-sᵒe-tə			t-ya-sᵒe-tə
Pl.2 Pl.3	qə-se-sᵒe-tə-x		ye-sᵒe-tə-x	qə-te-sᵒe-tə-x		ya-sᵒe-tə-x
Pl.3 Sg.1		sə-qə-w-a-tə	sə-r-a-tə		sə-qə-sᵒ-a-tə	s-ar-a-tə
Pl.3 Sg.2	wu-qə-s-a-tə		wu-r-a-tə	wu-qə-t-a-tə		w-ar-a-tə
Pl.3 Sg.3	qə-s-a-tə	qə-w-a-tə	r-a-tə	qə-t-a-tə	qə-sᵒ-a-tə	r-a-tə
Pl.3 Pl.1		tə-qə-w-a-tə	tə-r-a-tə		tə-qə-sᵒ-a-tə	t-ar-a-tə
Pl.3 Pl.2	sᵒə-qə-s-a-tə		sᵒə-r-a-tə	sᵒə-qə-t-a-tə		sᵒ-ar-a-tə
Pl.3 Pl.3	qə-s-a-tə-x	qə-w-a-tə-x	r-a-tə-x	qə-t-a-tə-x	qə-sᵒ-a-tə-x	r-a-tə-x

TYPE 3: S (short)+IO (very short)+P+R(+SP). fe- 'fall': present. Prepositional affix (P) te- 'on'.

Indirect Object

Sub.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1		sə-p-te-fe	sə-te-fe		sə-sᵒ-te-fe	s-a-te-fe
Sg.2	wu-qə-s-te-fe		wu-te-fe	wu-qə-t-te-fe		w-a-te-fe
Sg.3	qə-s-te-fe	qə-p-te-fe	te-fe	qə-t-te-fe	qə-sᵒ-te-fe	a-te-fe
Pl.1		tə-p-te-fe	tə-te-fe		tə-sᵒ-te-fe	t-a-te-fe
Pl.2	sᵒə-qə-s-te-fe		sᵒə-te-fe	sᵒə-qə-t-te-fe		sᵒ-a-te-fe
Pl.3	qə-s-te-fe-x	qə-p-te-fe-x	te-fe-x	qə-t-te-fe-x	qə-sᵒ-te-fe-x	a-te-fe-x

TYPE 4: DO (short)+P+S (long in present indicative)+R(+OP). up'č'ə- 'cut': present. Prepositional affix pe-, pə- 'by the point'.

Direct Object

Sub.	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1		wu-pə-se-up'č'ə	pə-se-up'č'ə		sᵒə-pə-se-up'č'ə	pə-se-up'č'ə-x
Sg.2	sə-pə-we-up'č'ə		pə-we-up'č'ə	tə-pe-we-up'č'ə		pə-we-up'č'ə-x
Sg.3	sə-p-ye-up'č'ə	wu-p-ye-up'č'ə	p-ye-up'č'ə	tə-p-ye-up'č'ə	sᵒə-p-ye-up'č'ə	p-ye-up'č'ə-x
Pl.1		wu-pə-te-up'č'ə	pə-te-up'č'ə		sᵒə-pə-te-up'č'ə	pə-te-up'č'ə-x
Pl.2	sə-pə-sᵒe-up'č'ə		pə-sᵒe-up'č'ə	tə-pə-sᵒe-up'c'ə		pə-sᵒe-up'č'ə-x
Pl.3	sə-p-a-up'č'ə	wu-p-a-up'č'ə	p-a-up'č'ə	tə-p-a-up'č'ə	sᵒə-p-a-up'č'ə	p-a-up'č'ə-x

TYPE 5: DO (short)+IO² (long)+P+IO¹ (long)+S (long in present)+R(+OP). tə-'give': present.

Indirect Object₂

Sub. D.O.I.O.¹	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Sg.1 Sg.2 Sg.3			w-ye-f-ye-se-tə			w-ya-f-ye-se-tə
Sg.1 Sg.2 Pl.3			w-ye-f-ya-se-tə			w-ya-f-ya-se-tə
Sg.1 Sg.3 Sg.2			yef-we-se-tə			ya-f-we-se-tə
Sg.1 Sg.3 Pl.2			ye-f-sᵒe-se-tə			ya-f-sᵒe-se-tə
Sg.1 Sg.3 Sg.3		p-f-ye-se-tə	ye-f-ye-se-tə		sᵒ-f-ye-se-tə	ya-f-ve-se-tə
Sg.1 Sg.3 Pl.3		p-f-ya-se-tə	ye-f-ya-se-tə		sᵒ-f-ya-se-tə	ya-f-ya-se-tə
Sg.1 Pl.2 Sg.3			sᵒ-ye-f-ye-se-tə			sᵒ-ya-f-ye-se-tə
Sg.1 Pl.2 Pl.3			sᵒ-ye-f-ya-se-tə			sᵒ-ya-f-ya-se-tə
Sg.1 Pl.3 Sg.2			ye-f-we-se-tə-x			ya-f-we-se-tə-x
Sg.1 Pl.3 Pl.2			ye-f-sᵒe-se-tə-x			ya-f-sᵒe-se-tə-x
Sg.1 Pl.3 Sg.3		p-f-ye-se-tə-x	ye-f-ye-se-tə-x		sᵒ-f-ye-se-tə-x	ya-f-ye-se-tə-x
Sg.1 Pl.3 Pl.3		p-f-ya-se-tə-x	ye-f-ya-se-tə-x		sᵒ-f-ya-se-tə-x	ya-f-ya-se-tə-x
Sg.2 Sg.1 Sg.3			s-ye-f-ye-we-tə			s-ya-f-ye-we-tə
Sg.2 Sg.1 Pl.3			s-ye-f-ya-we-tə			s-ya-f-ya-we-tə
Sg.2 Sg.3 Sg.1			ye-f-se-we-tə			ya-f-se-we-tə
Sg.2 Sg.3 Pl.1			ye-f-te-we-tə			ya-f-te-we-tə
Sg.2 Sg.3 Sg.3	s-f-ye-we-tə		ye-f-ye-we-tə			ya-f-ye-we-tə
Sg.2 Sg.3 Pl.3	s-f-ya-we-tə		ye-f-ya-we-tə			ya-f-ya-we-tə
Sg.2 Pl.1 Sg.3			t-ye-f-ye-we-tə	t-f-ye-we-tə		t-ya-f-ye-we-tə
Sg.2 Pl.1 Pl.3			t-ye-f-ya-we-tə	t-f-ya-we-tə		t-ya-f-ya-we-tə
Sg.2 Pl.3 Sg.1			ye-f-se-we-tə-x			ya-f-se-we-tə-x
Sg.2 Pl.3 Pl.1			ye-f-te-we-tə-x			ya-f-te-we-tə-x
Sg.2 Pl.3 Sg.3	s-f-ye-we-tə-x		ye-f-ye-we-tə-x	t-f-ye-we-tə-x		ya-f-ye-we-tə-x
Sg.2 Pl.3 Pl.3	s-f-ya-we-tə-x		ye-f-ya-we-tə-x	t-f-ya-we-tə-x		ya-f-ya-we-tə-x
Sg.3 Sg.1 Sg.2			sə-r-f-w-ye-tə			s-ar-f-w-ye-tə
Sg.3 Sg.1 Pl.2			sə-r-f-sᵒe-ye-tə			s-ar-f-sᵒe-ye-tə
Sg.3 Sg.1 Sg.3		sə-p-fə-r-ye-tə	sə-r-fə-r-ye-tə		so-sᵒ-fə-r-ye-tə	s-ar-fə-r-ye-tə
Sg.3 Sg.1 Pl.3		sə-p-f-ar-ye-tə	sə-r-f-ar-ye-tə		se-sᵒ-f-ar-ye-tə	s-ar-ar-ye-tə

Combination	s-f	p-f	ye-f / wu-r-f	t-f	sº-f	ya-f / w-ar
Sg.3 Sg.2 Sg.1			wu-r-fə-se-ye-tə			w-ar-tə-se-ye-tə
Sg.3 Sg.2 Pl.1			wu-r-fə-te-ye-tə			w-ar-fə-te-ye-tə
Sg.3 Sg.2 Sg.3	wu-s-fə-r-ye-tə		wu-r-fə-r-ye-tə	wu-t-fə-r-ye-tə		w-ar-fə-r-ye-tə
Sg.3 Sg.2 Pl.3	wu-s-f-ar-ye-tə		wu-r-f-ar-ye-tə	wu-t-f-ar-ye-tə		w-ar-f-ar-ye-tə
Sg.3 Sg.3 Sg.1		p-f-se-ye-tə	ye-f-se-ye-tə		sº-f-se-ye-tə	ya-f-se-ye-tə
Sg.3 Sg.3 Pl.1		p-f-te-ye-tə	ye-f-te-ye-tə		sº-f-te-ye-tə	ya-f-te-ye-tə
Sg.3 Sg.3 Sg.2	s-f-we-ye-tə		ye-f-we-ye-tə	t-f-we-ye-tə		ya-f-we-ye-tə
Sg.3 Sg.3 Pl.2	s-f-sºe-ye-tə		ye-f-sºe-ye-tə	t-f-sºe-ye-tə		ya-f-sºe-ye-tə
Sg.3 Sg.3 Sg.3	s-fə-r-ye-tə	p-fə-r-ye-tə	ye-fə-r-ye-tə	t-fə-r-ye-tə	sº-fə-r-ye-tə	ya-fə-r-ye-tə
Sg.3 Sg.3 Pl.3	s-f-ar-ye-tə	p-f-ar-ye-tə	ye-f-ar-ye-tə	t-f-ar-ye-tə	sº-f-ar-ye-tə	ya-f-ar-ye-tə
Sg.3 Pl.1 Sg.2			t-ye-f-we-ye-tə			t-ya-f-we-ye-tə
Sg.3 Pl.1 Pl.2			t-ye-f-sºe-ye-tə			t-ya-f-sºe-ye-tə
Sg.3 Pl.1 Sg.3		tə-p-fə-r-ye-tə	tə-r-fə-r-ye-tə		tə-sº-fə-r-ye-tə	t-ar-fə-r-ye-tə
Sg.3 Pl.1 Pl.3		tə-p-f-ar-ye-tə	tə-r-f-ar-ye-tə		tə-sº-f-ar-ye-tə	t-ar-f-ar-ye-tə
Sg.3 Pl.2 Sg.1			sºə-r-fə-s-ye-tə			sº-ar-fə-s-ye-tə
Sg.3 Pl.2 Pl.1			sºə-r-fə-t-ye-tə			sº-ar-fə-t-ye-tə
Sg.3 Pl.2 Sg.3	sºə-s-fə-r-ye-tə		sºə-r-fə-r-ye-tə	sºə-t-fə-r-ye-tə		sº-ar-fə-r-ye-tə
Sg.3 Pl.2 Pl.3	sºə-s-f-ar-ye-tə		sºə-r-f-ar-ye-tə	sºə-t-f-ar-ye-tə		sº-ar-f-ar-ye-tə
Sg.3 Pl.3 Sg.1		p-f-se-ye-tə-x	ye-f-se-ye-tə-x		sº-f-se-ye-tə-x	ya-f-se-ye-tə-x
Sg.3 Pl.3 Pl.1		p-f-te-ye-tə-x	ye-f-te-ye-tə-x		sº-f-te-ye-tə-x	ya-f-te-ye-tə-x
Sg.3 Pl.3 Sg.2	s-f-we-ye-tə		ye-f-we-ye-tə-x	t-f-we-ye-tə-x		ya-f-we-ye-tə-x
Sg.3 Pl.3 Pl.2	s-f-sºe-ye-tə-x		ye-f-sºe-ye-tə-x	t-f-sºe-ye-tə-x		ya-f-sºe-ye-tə-x
Sg.3 Pl.3 Sg.3	s-fə-r-ye-tə-x	p-fə-r-ye-tə-x	ye-fə-r-ye-tə-x	t-fə-r-ye-tə-x	sº-fə-r-ye-tə-x	ya-fə-r-ye-tə-x
Sg.3 Pl.3 Pl.3	s-f-ar-ye-tə-x	p-f-ar-ye-tə-x	ye-f-ar-ye-tə-x	t-f-ar-ye-tə-x	sº-f-ar-ye-tə-x	ya-f-ar-ye-tə-x
Pl.1 Sg.2 Sg.3			w-ye-f-ye-tə-tə			w-ya-f-ye-tə-tə
Pl.1 Sg.2 Pl.3			w-ye-f-ya-tə-tə			w-ya-f-ya-tə-tə
Pl.1 Sg.3 Sg.2			ye-f-we-tə-tə			ya-f-we-tə-tə
Pl.1 Sg.3 Pl.2			ye-f-sºe-tə-tə			ya-f-sºe-tə-tə
Pl.1 Sg.3 Sg.3		p-f-ye-tə-tə	ye-f-ye-tə-tə		sº-f-ye-tə-tə	ya-f-ye-tə-tə
Pl.1 Sg.3 Pl.3		p-f-ya-tə-tə	ye-f-ya-tə-tə		sº-f-ya-tə-tə	ya-f-ya-tə-tə
Pl.1 Pl.2 Sg.3			sº-ye-f-ye-tə-tə			sº-ya-f-ye-tə-tə
Pl.1 Pl.2 Pl.3			sº-ye-f-ya-tə-tə			sº-ya-f-ya-tə-tə

TYPE 5, *continued*

Indirect Object$_2$

Sub. D.O.I.O.[1]	Sg.1	Sg.2	Sg.3	Pl.1	Pl.2	Pl.3
Pl.1 Pl.3 Sg.2			ye-f-we-te-to-x			ya-f-we-te-to-x
Pl.1 Pl.3 Pl.2			ye-f-s^{o}e-te-to			ya-f-s^{o}e-te-to-x
Pl.1 Pl.3 Sg.3		p-f-ye-te-to-x	ye-f-ye-te-to-x		s^o-f-ye-te-to-x	ya-f-ye-te-to-x
Pl.1 Pl.3 Pl.3		p-f-ya-te-to-x	ye-f-ya-te-to-x		s^o-f-ya-te-to-x	ya-f-ya-te-to-x
Pl.2 Sg.1 Sg.3			s-ye-f-ye-s^{o}e-te			s-ya-f-ye-s^{o}e-te
Pl.2 Sg.1 Pl.3			s-ye-f-ya-s^{o}e-te			s-ya-f-ya-s^{o}e-te
Pl.2 Sg.3 Sg.1			ye-f-se-s^{o}e-te			ya-f-se-s^{o}e-te
Pl.2 Sg.3 Pl.1			ye-f-te-s^{o}e-te			ya-f-te-s^{o}e-te
Pl.2 Sg.3 Sg.3	s-f-ye-s^{o}e-te		ye-f-ye-s^{o}e-te	t-f-ye-s^{o}e-te		ya-f-ye-s^{o}e-te
Pl.2 Sg.3 Pl.3	s-f-ya-s^{o}e-te		ye-f-ya-s^{o}e-te	t-f-ya-s^{o}e-te		ya-f-ya-s^{o}e-te
Pl.2 Pl.1 Sg.3			t-ye-f-ye-s^{o}e-te			t-ya-f-ye-s^{o}e-te
Pl.2 Pl.1 Pl.3			t-ye-f-ya-s^{o}e-te			t-ya-f-ya-s^{o}e-te
Pl.2 Pl.3 Sg.1			ye-f-se-s^{o}e-te			ya-f-se-s^{o}e-te
Pl.2 Pl.3 Pl.1			ye-f-te-s^{o}e-te			ya-f-te-s^{o}e-te
Pl.2 Pl.3 Sg.3	s-f-ye-s^{o}e-te-x		ye-f-ye-s^{o}e-to-x	t-f-ye-s^{o}e-to-x		ya-f-ye-s^{o}e-to-x
Pl.2 Pl.3 Pl.3	s-f-ya-s^{o}e-te-x		ye-f-ya-s^{o}e-to-x	t-f-ya-s^{o}e-to-x		ya-f-ya-s^{o}e-to-x
Pl.3 Sg.1 Sg.2			so-r-f-we-ya-te			s-ar-f-we-ya-te
Pl.3 Sg.1 Pl.2			so-r-f-s^{o}e-ya-te			s-ar-f-s^{o}e-ya-te
Pl.3 Sg.1 Sg.3		so-p-fo-r-ya-te	so-r-fo-r-ya-te		so-s^o-f-r-ya-te	s-ar-fo-r-ya-te
Pl.3 Sg.1 Pl.3		so-p-f-ar-ya-te	so-r-f-ar-ya-te		so-s^o-f-ar-ya-te	s-ar-f-ar-ya-te
Pl.3 Sg.2 Sg.1			wu-r-fo-se-ya-te			w-ar-fo-se-ya-te
Pl.3 Sg.2 Pl.1			wu-r-fo-te-ya-te			w-ar-fo-te-ya-te
Pl.3 Sg.2 Sg.3	wu-s-fo-r-ya-te		wu-r-fo-r-ya-te	wu-t-fo-r-ya-te		w-ar-fo-r-ya-te
Pl.3 Sg.2 Pl.3	wu-s-f-ar-ya-te		wu-r-f-ar-ya-te	wu-t-f-ar-ya-te		w-ar-f-ar-ya-te
Pl.3 Sg.3 Sg.1		p-f-se-ya-te	ye-f-se-ya-te		s^o-f-se-ya-te	ya-f-se-ya-te
Pl.3 Sg.3 Pl.1		p-f-te-ya-te	ye-f-te-ya-te		s^o-f-te-ya-te	ya-f-te-ya-te
Pl.3 Sg.3 Sg.2	s-f-we-ya-te		ye-f-we-ya-te	t-f-we-ya-te		ya-f-we-ya-te
Pl.3 Sg.3 Pl.2	s-f-s^{o}e-ya-te		ye-f-s^{o}e-ya-te	t-f-s^{o}e-ya-te		ya-f-s^{o}e-va-te

Pl.3 Sg.3 Sg.3	s-fə-r-yə-tə	p-fə-r-yə-tə	ye-fə-r-ya-tə	t-fə-r-ya-tə	s^o-fə-r-ya-tə	ya-fə-r-ya-tə
Pl.3 Sg.3 Pl.3	s-f-ar-ya-tə	p-far-ya-tə	ye-f-ar-ya-tə	t-f-ar-ya-tə	s^o-f-ar-ya-tə	ya-f-ar-ya-tə
Pl.3 Pl.1 Sg.2			t-ye-f-we-ya-tə			t-ya-f-we-ya-tə
Pl.3 Pl.1 Pl.2			t-ye-f-s^{o}e-ya-tə			t-ya-f-s^{o}e-ya-tə
Pl.3 Pl.1 Sg.3		tə-p-fə-r-yə-tə	tə-r-fə-r-ya-tə		tə-s^o-fə-r-ya-tə	tə-r-fə-r-ya-tə
Pl.3 Pl.1 Pl.3		tə-p-f-ar-ya-tə	tə-r-f-ar-ya-tə		tə-s^o-f-ar-ya-tə	tə-r-f-ar-ya-tə
Pl.3 Pl.2 Sg.1			s^{o}ə-r-fə-s-ya-tə			s^o-ar-fə-s-ya-tə
Pl.3 Pl.2 Pl.1			s^{o}ə-r-fə-t-ya-tə			s^o-ar-fə-t-ya-tə
Pl.3 Pl.2 Sg.3	s^{o}ə-s-fə-r-ya-tə		s^{o}ə-r-fə-r-ya-tə	s^{o}ə-t-fə-r-ya-tə		s^o-ar-fə-r-ya-tə
Pl.3 Pl.2 Pl.3	s^{o}ə-s-f-ar-ya-tə		s^{o}ə-r-f-ar-ya-tə	s^{o}ə-t-f-ar-ya-tə		s^o-ar-f-ar-ya-tə
Pl.3 Pl.3 Sg.1	s-f-we-ya-tə-x	p-f-se-ya-tə-x	ye-f-se-ya-tə-x		s^o-f-se-ya-tə-x	ya-f-se-ya-tə-x
Pl.3 Pl.3 Pl.1	s-f-s^{o}e-ya-tə-x	p-f-te-ya-tə-x	ye-f-te-ya-tə-x		s^o-f-te-ya-tə-x	ya-f-te-ya-tə-x
Pl.3 Pl.3 Sg.2	s-f-we-ya-tə-x		ye-f-we-ya-tə-x	t-f-we-ya-tə-x		ya-f-we-ya-tə-x
Pl.3 Pl.3 Pl.2	s-f-s^{o}e-ya-tə-x		ye-f-we-ya-tə-x	t-f-s^{o}e-ya-tə-x		ya-f-s^{o}e-ya-tə-x
Pl.3 Pl.3 Sg.3	s-fə-r-ya-tə-x	p-fə-r-ya-tə-x	ye-f-r-ya-tə-x	t-fə-r-ya-tə-x	s^{o}fə-r-ya-tə-x	ya-fə-r-ya-tə-x
Pl.3 Pl.3 Pl.3	s-f-ar-ya-tə-x	p-far-ya-tə-x	ye-f-ar-ya-tə-x	t-f-ar-ya-tə-x	s^o-f-ar-ya-tə-x	ya-f-ar-ya-tə-x

In the above conjugation the prepositional affix used is f(ə)-'for'. The first entry in column 2 (IO² Sg.2) would be translated 'I give him (her, it) to him (her, it) for you'.

It may be noted from the forms presented here that what is most characteristic of the languages possessing objective verbal conjugations is their rigorous regularity.[10] Once the structure of a form and the pronominal affixes are known, it is possible to construct any transitive verb and many intransitive verbs objectively. Thus, the complexity of 'complex' verbal systems like those of Basque or Circassian lies in their remarkable adaptability to virtually any grammatical situation involving them.

[10] A possible exception is the Circassian preposition qe-, qə -, qa- 'to', found in many of the forms presented above. The actual rules governing its use have not as yet been thoroughly formulated.

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THE PAST PARTICIPLE IN AFRIKAANS

Upon examining the Afrikaans verb, the Germanic linguist will at first be struck by its simplicity. With few exceptions, each verb may be said to have a basic form (subsequently referred to as ROOT) which functions as infinitive, present indicative and imperative without alteration, e.g. *ons sal die glas breek* 'we shall break the glass', *hulle breek die glas* 'they break the glass', *breek dit!* 'break it!' By merely prefixing *ge-* to this same root, most verbs form a weak past participle which, coupled with an auxiliary, forms a present perfect construction that does service for all past tenses of the Dutch verb, e.g. *ek het die glas gebreek* 'I broke, have (had) broken, the glass'.

On closer inspection, however, the linguist may find himself confronted by certain phenomena which are seemingly capricious, viz. the appearance of a strong form when the past ptc. functions as an adjective, e.g. *gebroke* (*Engels*) 'broken (English)', or of another form which, although weak, differs more or less from the verbal, e.g. *gebreekte* (*glase*) 'broken (glasses)'.

The purpose of this article is two-fold: first, to classify verbal roots in such a way that the non-verbal (or adjectival) weak past ptc. of each may be predicted; secondly, to show that where a strong past ptc. survives alongside of a weak, a difference in nuance generally obtains.

When used attributively, all weak past ptcs. show the ending *-e*. In many cases, the retention of this inflexion has resulted in the preservation of a Dutch stem-final or suffixed consonant elsewhere lost. By grouping Afr. roots according to the Du. verbs in which they have their origin, five distinct classes appear:

CLASS I: Roots ending in *-d* or *-t* derived from Du. infins. with the same stem ending, e.g. *brand* 'burn', *praat* 'speak' (*branden, praten*). Roots of this type are the only ones whose verbal and non-verbal weak past ptcs. are identical, e.g. *hy het die hout gebrand* 'he burned the wood', *die hout is gebrand* 'the wood is burnt', *gebrande hout* 'burnt wood'. (For *-e* of *gebrande, vide supra*.)

CLASS II: Roots like *versag* 'soften', *verplig* 'compel', derived from Du. infins. with the stem ending *-cht-* (*verzachten, verplichten*). Here, attributive *-e* has resulted in the

preservation of Du. *t* in the non-verbal past ptc., e.g. *'n versagte vonnis* 'a commuted sentence', *verpligte krygsdiens* 'compulsory military service'. Cf. *die regter het die vonnis versag* 'the judge commuted the sentence'.

CLASS III: Roots like *inlê* 'inlay', derived from Du. infins. with the stem ending *-g-* (*inleggen*). Such verbs in Du. form their past ptc. in *-d* (*ingelegd*), and the Afr. non-verbal past ptc. preserves both the *g*, elsewhere lost, and *d*, e.g. *ingelegde houtwerk* 'inlaid woodwork'.

CLASS IV: Roots like *skok* 'shock', *pas* 'suit', derived from Du. infins. whose past ptcs. show a suffixed *-t* (*schokken*, *geschokt*; *passen*, *gepast*). Afr. preserves *t* in the non-verbal past ptc., e.g. *gepaste klere* 'suitable clothes'.

CLASS V: Roots like *trou* 'marry', *beskerm* 'protect', derived from Du. infins. whose past ptcs. show a suffixed *-d* (*trouwen. getrouwd*; *beschermen*, *beschermd*). The adjectival past ptcs. of such roots preserve Du. *d*, e.g. *hy is getroud* 'he is married'.

The number of strong past ptcs. which have been retained in Afr. as adjectives is enormous. In some cases, however, while the strong form is preserved, a weak form is found along with it, e.g. *gebroke Engels*, *gebreekte glase* 'broken English, broken glasses'; *'n opgewonde man*, *'n opgewende oorlosie* 'an excited (i.e. "wound-up") man, wound-up watch'; *agter geslote deure*, *'n toegesluite deur* 'behind closed doors (i.e. in private), a closed door'; *gebonde styl, met vasgebinde arms en bene* 'poetic (i.e. bound) style, with arms and legs bound'; *'n geskore man*, *'n geskeerde man* 'a man stranded (i.e. shorn), a shaven man'. In such instances, it may be observed that the strong form tends to have a figurative meaning, while the weak conveys the literal meaning of the verb.

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A PROBLEM OF RULE ORDERING:
ANARTHROUS LOCATIVES IN YIDDISH

One of the major tenets of post-Bloomfieldian structuralism was that there was a rigid hierarchy of "levels" in language. The lowest level, in this theory, was the phonetic, the next, the phonemic and so forth. Any level could be described in terms of the constituents of the preceding lower levels (e.g., the morphology in terms of the phonology), but not vice-versa (cf. Gleason, 1961, p. 66). Although generative transformational grammar may in some sense be said to have "turned this model upside down" (Longacre, 1964, p. 7), it has nevertheless retained the concept of a hierarchy of levels, with the difference that it insists that lower levels must be described in terms of the higher ones (e.g., syntactic information can, and indeed must, be used as the input to the phonetic rules, cf. Shane, 1967 and Chomsky and Halle, 1968). In generative-transformational grammar, morphophonemic rules are considered low level rules which are applied only after the entire cycle of syntactic derivation. However, recently, problems in the handling of data from various languages have required solutions which call into question the strict hierarchical ordering of rules. In this paper we shall discuss a problem of this sort: the derivation of the apparently anarthrous (article-less) locative prepositional phrases of Yiddish.[1]

In Yiddish,[2] as in the other West Germanic languages, there are various temporal and instrumental adverbial phrases in which a preposition occurs with a countable noun which is not preceded by an article.[3]

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[1] We would like to thank Jerry Sadock, John Robert Ross, Charles-James N. Bailey and Alan M. Stevens for their illuminating discussion of the problems involved here, and Fannie Lincoff to whose native-speaker intuitions the data were offered for judgment.

[2] The Yiddish described here is the contemporary standard language such as is used on the dramatic (non-comic) stage and by radio announcers.

[3] The definite article of Yiddish has the following forms:

	MASCULINE	FEMININE	NEUTER
Nominative	der	di	dos
Genitive	dem	der	dem
Dative	dem	der	dem
Accusative	dem	di	dos

In the plural the definite article is invariably *di*.

The article is to be distinguished from the *proximate* demonstrative, which is homophonic with it

bay naxt	at night
far tog	(at) dawn (lit. 'before day')
af yontev	for (a/the) holiday
eu fus	by foot
mit fayl un boygn	with bow and arrow

There are as well certain locative phrases which also seem to follow the same pattern, e.g.,

in eimer	in the room
in park	in the park
lebn park	near the park
in šul	to school, in school, at school
fun šul	from school.

Uriel Weinreich (1949, p. 57, from which the preceding five examples are taken) sees such phrases as "idiomatic" and does not attempt to give any other explanation for the non-occurrence of the article. On first glance it would be tempting to treat such expressions as a generalization of a structure similar to the Ø article found in English with certain locative expressions of rest and goal, e.g., *to school, in school, at school, in church, at church, to church, in bed, at college*, etc. where the noun head represents a class of places rather than a specific place; we may term this a generic locative.

It would also be tempting to see this as another instance of Yiddish having preserved, along with English, an older West Germanic structure as against an innovation on the part of Standard German which has made the article obligatory with all locatives except *Haus*, cf.

| *zu Hause* | at home |
| *nach Hause* | (to) home |

but

in die Schule	to school
in der Schule	in/at school
im Zimmer	in the room
im Park	in the park
neben dem Park	next to the park
von der Schule	from school.

Yiddish also shares with English the obligatory transformation which inserts an

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except that the demonstrative always bears primary stress. In this discussion we shall not be concerned with the demonstrative since it undergoes none of the morphemic processes of reduction described here.

article when a relative clause (which may later be reduced) is embedded (cf. Perlmutter, 1968). Compare the following:

Er geyt in šul yedn tog 'He goes to school every day'

but

Er geyt in der šul afn ekgas 'He goes to the school on the corner'
Er geyt in .a šul vu er muz šver arbetn 'He goes to a school where he has to work hard'
Er ligt in bet 'He is in bed'
Er ligt inəm groysn bet 'He's in the big bed'

Although there are indeed these apparent points of similarity between the Yiddish and English structures, a closer examination will show that (1) this phenomenon is not "idiomatic" in Yiddish, but is, rather, systematic and predictable and (2) that, in fact, the Yiddish structure, on some other than surface level, is identical with that of German.

An examination of the locative prepositional phrases in Yiddish which occur without articles shows that in these structures the preposition involved always ends in a nasal segment and the omitted article is always definite. Furthermore, the locative phrase is not necessarily a generic one, as it is in English. As well as *in šul* and *in bet* we may also have phrases such as:

(a) *Vu zaynen di lefl*? 'Where are the spoons?'
     Zey zaynen in gloz 'They are in the glass'
     Vu štet dos gloz? 'Where is the glass?'
     Es štet afn tiš 'It is on the table'
(b) *Di lefl zaynen inəm gloz afn tiš* 'The spoons are in the glass on the table'
     Bay undz šteyen di lefl alamol in a gloz 'At our house the silverware (lit. spoons) are always kept in a glass'

As is shown by the above utterances, the glass in question is a specific one and in no sense generic. In fact, this structure can be found with *any* singular nominal following a preposition with final nasal and is not found with prepositions which have any other phonological shape, e.g.,

in almer	in the cupboard	

but

afn almer	on the cupboard	(= af dem almer)
lebn hoyz	near the house	
baym hoyz	near the house	(= bay dem hoyz)
kayn štot	toward the city	
¢u der štot	to the city.	

At this point it would seem that the most logical explanation of this phenomenon is a simple phonological one: In Yiddish, definite articles, which are never stressed, can reduce in rapid speech to a simple syllabic nasal — as they frequently do in German — and the process involved is a simple one of loss of syllabicity and assimilation. However, that more is involved is shown by the fact that no article appears after this set of prepositions even when the noun is feminine and hence has the article *der*, e.g.,

in gas	in the street
lebn tir	near the door
fun štot	from the city.

The problem is further complicated by the fact that in precisely those environments where the masculine and neuter *dem* reduce to *n* (i.e. after all prepositions which end in a non-nasal consonant) the feminine article, too, shows up as *n* in rapid speech, e.g.,

afn gas	on the street
untern hant	under the hand.[4]

As might be expected, the article also reappears if the nominal is pluralized:

lebn šul	*lebn di šuln*	near the schools
in gloz	*in di glezer*	in the glasses
fun hoyz	*fun di hayzer*	out of the houses.

With the description of this variation we have achieved a kind of observational adequacy.

There remain, however, two questions: (1) how these statements can best be introduced in a transformational grammar of Yiddish and (2) what the historical process must have been which led to this state of affairs.

For any grammar of Yiddish, we must conceive of the rules which generate this structure as having the following general forms. These rules are ordered as given with respect to one another, but in a complete grammar of Yiddish other rules would undoubtedly intervene between some or all of them.

RULE A   *Prep   NP*
                1   2   ⇒
                1   2
                      [+ *dative*]

---

[4] Although appeals to analogy are always suspect, we have no better explanation to offer for these facts. Forms such as *in gas* occur regularly in all styles of speech and in writing. On the other hand, *afn gas* and related constructions are almost exclusively phenomena of rapid speech and, like any such form, are usually disowned by native speakers who are made aware of what they have said.

This rule, which is the most general, establishes that all prepositions in Yiddish govern the dative case.

RULE B $\quad X \quad Prep \quad \underset{NP}{\left[\begin{bmatrix} + Def \\ + Dat \end{bmatrix} \quad N \quad \underset{NP}{S}\right]} \quad Y$

$$1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \Rightarrow$$
$$1 \quad 2 \quad [\partial n] \quad 4 \quad 5 \quad 6$$

This rule changes the dative masculine and neuter article *dem* to *ən* under normal speech conditions. A similar rule would change it to *m* if the preposition ends in a [− consonantal] segment (*bay*, *ṛu*). The feminine dative article becomes *ən* after a preposition ending in a [+ consonantal] segment under conditions of rapid speech if the further condition is met that $5 = \emptyset$, that is, that the object of the preposition is not modified by either a full or a reduced relative clause.

RULE C $\quad \underset{Prep}{\left[(C_0)(V)(C_0)V\begin{Bmatrix} N \\ C_0 \end{Bmatrix}\right]} \quad \# \quad \underset{Prep}{[\partial n} \quad \underset{NP}{N} \quad \underset{NP}{S]} \Rightarrow$

$\underset{Prep}{\left[(C_0)(V)(C_0)V\begin{Bmatrix} N \\ C_0 \end{Bmatrix}\partial n\right]} \quad \underset{Prep}{[N} \quad \underset{NP \; NP}{S]}$

In effect, this rule erases the word boundary between the preposition and the reduced article, so that the article becomes postclitic to the preposition.

RULE D $\quad \left[(C_0)(V)(C_0)V\begin{Bmatrix} N \\ C_0 \end{Bmatrix}\partial n\right] \quad N \quad S \Rightarrow$

$i \left\{ \begin{aligned} & [(C_0)(V)(C_0)VN\partial m] \quad /S \neq \emptyset \\ & \left[(C_0)(V)(C_0)V\begin{Bmatrix} N \\ C_0 \end{Bmatrix}n\right] \text{ otherwise} \end{aligned} \right\}$

ii

This rule performs the following functions: Di says that if the preposition ends in a nasal and its noun is modified, then a nasal dissimilation takes place. Dii says that, if the preposition ends in a nasal and the noun is not modified by *S*, or under all conditions if the preposition ends in any non-nasal consonant, the *ə* of the now-enclitic article is deleted.

One written attestation of afn + N_{fem}. is Harkavy 1898, s.v.*hand* (sic!) where *unter der hand* 'at hand' is immediately followed by *avegmaxn unter'n hand* 'to disparage', an 'error' which is corrected in his dictionary of 1928. (While Harkavy's Yiddish is native and impeccable, his spelling in the earlier dictionary is, within the limitations of the Hebrew alphabet, heavily Germanicized.)

Both the nasal dissimilation rule and the ə-deletion rule are independently motivated: both are needed, for example, for the inflectional morphemes of the adjective. In the adjective, the underlying inflectional morph for the masc. gen., dat., and acc. and the neut. gen. and dat. is *əN*.

$$\text{\textit{šeyn}} + \text{\textit{əN}} \Rightarrow \text{\textit{šeynəm}} \text{ 'pretty'}$$

by the rule of nasal dissimilation, and

$$\text{\textit{gut}} + \text{\textit{əN}} \Rightarrow \text{\textit{gutn}} \text{ 'good'}$$

by the rule of ə-deletion.

RULE E $[(C_0)(V)(C_0)VNn] \Rightarrow [(C_0)(V)(C_0)VN]$

This is a rule of complete assimilation.[5]

In order to see how these rules work, let us generate some locative prepositional phrases.

A. *in feld* 'in the field'

Initial String: $[in]$ $\begin{bmatrix} feld \\ \begin{bmatrix} +neut \\ +sg \\ +def \end{bmatrix} \end{bmatrix}$
                    $P\ P$
                    $NPNP$

By RULE A $[in]$ $\begin{bmatrix} feld \\ \begin{bmatrix} +neut \\ +sg \\ +def \\ +dative \end{bmatrix} \end{bmatrix}$
                    $P\ P$
                    $NPNP$

At some point between the operation of Rule A and Rule B, the article-spelling rule will have applied, resulting in the string

$$[in]\ \begin{bmatrix} \begin{bmatrix} +Def \\ +Dat \end{bmatrix} feld \end{bmatrix}$$
$$P\ \ P\ \ NPNP$$

---

[5] The preposition *arum* 'around' shows the following slight anomaly: While we find, predictably, *arum hoyz* 'around the house', we only find *arum dem kleynem hoyz* 'around the small house', but not * *arumen kleynem hoyz*. This is probably the result of the fact that *arum* is the only preposition which terminates in a nasal which is stressed on the second syllable.

This string meets the structural description for Rule B, which will then apply, producing

$$
\begin{array}{llll}
[in] & [\partial n\ feld] \\
P & P & NP & NP
\end{array}
$$

By RULE C, this will become

$$
\begin{array}{llll}
[in\partial n] & [feld] \\
P & P & NP & NP
\end{array}
$$

RULE Di does not apply since, although the preposition ends in a nasal, *feld* is not followed by an *S*. Therefore, Rule Dii applies,

$$
\begin{array}{llll}
[in\ n] & [feld] \\
P & P & NP & NP
\end{array}
$$

which, by Rule E becomes the surface level string *in feld*, which looks as if it were anarthrous.

B.   *afn feld* 'on the field'

    Initial String: $\quad \begin{array}{ll} [af] \\ P \quad P \end{array} \quad \begin{bmatrix} feld \\ \begin{bmatrix} +neut \end{bmatrix} \\ +sg \\ +def \end{bmatrix}$

$$\begin{array}{ll} NP & NP \end{array}$$

By RULE A $\qquad \begin{array}{ll} [af] \\ P \quad P \end{array} \quad \begin{bmatrix} feld \\ \begin{bmatrix} +neut \end{bmatrix} \\ +sg \\ +def \\ +dat \end{bmatrix}$

$$\begin{array}{ll} NP & NP \end{array}$$

By article-spelling

$$ \begin{array}{ll} [af] \\ P \quad P \end{array} \quad \begin{bmatrix} \begin{bmatrix} +\ Def \\ +\ Dat \end{bmatrix} feld \end{bmatrix} $$

$$\begin{array}{ll} NP & NP \end{array}$$

By RULE B $\qquad \begin{array}{llll} [af] & [\partial n\ feld] \\ P & P & NP & NP \end{array}$

By RULE C

$$[af \partial n] \quad [feld]$$
$$P \quad P \quad NP \quad NP$$

By RULE Dii afn feld
which is the surface level string.

For a somewhat more complex derivation, let us try

    in\partial m grin\partial m feld 'in the green field'

Initial String:

$$[in] \quad [feld [feld (iz) grin]]$$
$$P \quad P \quad NP \quad S \qquad\qquad S \; NP$$

By RULE A

$$[in] \quad \begin{bmatrix} feld & [feld (iz) grin] \\ [+Dat] \; S & S \end{bmatrix}$$
$$P \quad P \qquad NP \qquad\qquad\qquad NP$$

By Article Spelling

$$[in] \quad \begin{bmatrix} \begin{bmatrix} +Def \\ +Dat \end{bmatrix} feld [feld (iz) grin] \\ S \qquad\qquad S \end{bmatrix}$$
$$P \quad P \qquad NP \qquad\qquad\qquad\qquad NP$$

By RULE B

$$[in] \quad [\partial n \; feld [feld (iz) grin]]$$
$$P \quad P \quad NP \qquad S \qquad\qquad S \; NP$$

By RULE C

$$[in \partial n] \quad [feld [feld (iz) grin]]$$
$$P \quad P \quad NP \; S \qquad\qquad S \; NP$$

RULE Di now applies, since $S \neq \emptyset$, yielding

$$[in \partial n] \quad [feld [feld (iz) grin]]$$
$$P \quad P \quad NP \; S \qquad\qquad S \; NP$$

Only at this point can the rules of relativization apply:

1. Relative clause formation

$$[in \partial m] \quad \begin{bmatrix} feld & [vos \; iz \; grin] \\ S & S \end{bmatrix}$$
$$P \quad P \qquad NP \qquad\qquad NP$$

2. Relative clause reduction

$$[in \partial m] \quad \begin{bmatrix} feld & [grin] \\ & Adj \; Adj \end{bmatrix}$$
$$P \quad P \qquad NP \qquad NP$$

3. Adjective Preposing

$$
\begin{array}{cc}
[in\partial m] & \left[\begin{array}{cc} [grin] & feld \\ Adj & Adj \end{array}\right] \\
P \quad P & \\
NP & NP
\end{array}
$$

4. Adjective Inflection Spelling

$$
\begin{array}{cc}
[in\partial m] & \left[\begin{array}{cc} [grin\partial N] & feld \\ Adj & Adj \end{array}\right] \\
P \quad P & \\
NP & NP
\end{array}
$$

5. Nasal Dissimilation

   inəm grinəm feld

It is, of course, perfectly obvious that the underlying process here is a simple phono-logical one of reduction and assimilation. The definite article *dem* is reduced under lack of stress to *ən*, and made enclitic to the preposition. That, in fact, the reduced form is *ən* and not *əm* is shown by the *n* which occurs after prepositions with final non-nasal consonants where, by any criterion of naturalness, an *m* is as possible as the *n*, e.g. *afn, noxn, ibern*.

The explanation of this is possible only on historical grounds. It is quite apparent that the rules for producing Yiddish *in feld* are identical with those which produce German *im Feld*, while those which produce *inəm grinəm feld* are an innovation in Yiddish. To explain the overt difference between Yiddish *in* where German has *im* it is necessary to go back to Late Middle Yiddish, ca. 1600-1750 (cf. Lincoff [Hall], 1963 and Landau and Wachstein, 1911). In this period there was great confusion between inherited accusative *den* and dative *dem*, so that either form was used for either function. The final overt result of this was the loss of *den* with *dem* being extended to the masculine accusative function as well. The rule we are here studying must have achieved its final form in just this period, so that the dative definite article which follows prepositions is, in fact, not the expected *dem* but rather the Late Middle Yiddish *den*. There is nothing unusual in this sort of retention of older forms. For example, in *the fallen leaves, fallen* does not derive from an underlying passive relative clause, as do the majority of past participles used adjectivally, but rather it is a retention of an older stage of English in which intransitive verbs of motion formed their perfects with *be* rather than *have*.

The real problem, however, which is posed by the data and its solution offered here, is the question of rule ordering. As we said before, it has usually been assumed that morphophonemic rules are low-level rules applied to the terminal string of the syntactic component. Yet, to formulate the rules offered here so that they could be applied after all syntactic rules had applied would complicate them both horribly and needlessly. It would be necessary to specify not only that the rule depends on the

members of a [*NP   S*] construction, but also to specify all of the possible strings
           NP   NP

which can result from the various relative clause reduction rules. Since both relative
clause formation and relative clause reduction are cyclic rules, and this phonological
rule must apply before either of the relativization rules since these may result in the
pruning of S, it would appear that we are dealing here with a morphophonemic rule
which must be applied pre-cyclically.

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LILLIAN HERLANDS HORNSTEIN

REDUPLICATIVES *REDIVIVUS*:
FROM *ACK-ACK* THROUGH *GO-GO*
TO *ZIG-ZAG* AND A LITTLE BEYOND

Reduplicatives — which Samuel Johnson thought "low", "vile", "cant", or "only used in ludicrous conversation"[1] — were already centuries old in his day. Although he intuitively opened the dictionary to such terms, if current, his own sensitive conscience gave warning when they were "too gross and vulgar for the delicate."[2] By others deem-doomed "cute" or "quaint",[3] how do these 'baseborn products of base beds', survive?

In our day of agonizing permissiveness, the answer must come from a reexamination of the present literary status of reduplicatives. Words 'interanimate' each other. Only in a context patterned and associative can we find the full sense of their stylistic place in today's language. To provide a control test, this paper studies reduplicatives used during a limited time and in a limited area, confining itself to materials which avoid the poverty of pedantry and the nouveau richness of slang. The period is generally the year just passed. The area — news reporting accepted as current, standard, and colloquial. The sources are a daily newspaper — the 'good grey' *New York Times* [hereinafter *NYT*]; a weekly magazine — *Time*; and a fortnightly "magazine of facts and ideas" — *The Reporter*.

The broad term *reduplicative* (and hence the process 'reduplication') designates word formation by which is created a derivative or inflected form.[4] It conventionally comprehends three categories:

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[1] Samuel Johnson, *Dictionary of the English Language*, 2 vols. (London, 1755). He so characterized *mishmash, twittle-twattle, [flim]-flam, chit-chat, higgledy-piggledy, teh-he.*

[2] Value judgments were imperative in view of Johnson's stated purpose: "I lately published a dictionary... for the use of such as aspire to exactness of criticism or elegance of style." *A Dictionary of the English Language... abstracted from the Folio Edition...*, 2 vols. (London, 1756), vol. I, Preface, first paragraph.

[3] Letter, 28 February 1968, to this writer from Theodore M. Bernstein, Assistant Managing Editor, *The New York Times*.

[4] This division is also used by Nils Thun, *Reduplicative Words in English A Study of Formations of the Types "Tick-tick", "Hurly-burly" and "Shilly-shally"* (Lund, 1963) (Uppsala dissertation). His study is based almost exclusively upon dictionaries. Reviewed by: Svante Stubelius, *Studia Neophilologica*, XXXV (1963), 318-22; Leonhard Lipka, *Indogermanische Forschungen*, LXIX (1964), 295-6; Herbert Koziol, *Archiv für das Studium d. neueren Sprachen* (Herrig), CCI (1964), 369-71;

1. IDENTICAL REDUPLICATION [5] (identical repetition or doubling; double stress, close juncture), e.g., *ack-ack, beep-beep*. Many words formed in this way (other than 'exotic' borrowings) echo sounds and capture rhythms.

2. ABLAUT REDUPLICATION [6] called also ROOT VARIATION or ROOT GRADATION (near identity of phonemes, with change of only the internal vowel), e.g., *chit-chat, dibble-dabble*. Such vowel changes are characteristic of English strong verbs, where variations of tense are indicated by changes in root vowels, while consonants remain unaffected. To historical linguists, words of this type — the ablaut formation historically authenticated — are the only 'true' reduplicatives.

3. RHYME REDUPLICATION[7] (near identity of phonemes with a change in only the initial phoneme), e.g., *fuddy-duddy, helter-skelter*. In these paired words initial consonants or consonant groups differ while vowel elements and final consonants are identical.[8] Some scholars dismiss the importance of iteration, i.e., doubling (category 1) or vowel gradation (category 2) in the life cycle of reduplicatives. To them the source and strength of the type come from the phonetic differentiation of the rhyme and the pulse of rhythm, in short — from the jingle and the beat.

Of the two thousand or more reduplicatives in English, only a relatively small number — a hundred or so — have turned up in the 'news'. Interestingly, the number of words currently in use for each of the three categories is about equal. Before we analyze their forms and semantic-stylistic spheres of action, we may observe that they give a striking impression of viability, as if they had just captured the youthful vigor of living speech. Virginia Woolf could rejoice in the fresh, expressive monosyllables of *flipflop* (so in original), which she relished as a useful new Americanism.[9] Yet this word and dozens of others, — not coelacanths, — are indeed venerable,

Kelsie B. Harder, *American Speech*, XL (1965), 134-35; Klaus Hansen, *Zeitschrift für Anglistik und Amerikanistik* (Berlin öst), XIII (1965), 412-15. Cf. Frederic G. Cassidy, "Iteration as a Word Forming Device in Jamaican Folk Speech", *American Speech*, XXXII (1957), 40-53; "Multiple Etymologies in Jamaican Creole", *ibid.*, XLI (1966), 214.

[5] Herbert Koziol, "Die Silbenverdoppelung im Englischen", *Eng. Studien*, LXXV (1942), 67-73; "Zu dem Reim- und Ablautbildungen im Englischen", *Eng. Studien* LXXIII (1938), 158-159; Yakov Malkiel, "Studies in Irreversible Binomials", *Lingua*, VIII (Amsterdam, 1959), 113-160; Hans Marchand, *The Categories and Types of Present-day English Wordformation. A Synchronic-Diachronic Approach* (Wiesbaden, 1960), pp. 345-355, 2nd ed. (München, 1969), pp. 429-439; W.L. McAtee, "Double-Barreled Words", *American Speech*, XXXIV (1959), 73, 149.

[6] Albert Carnoy, "The Real Nature of Dissimilation", *Transactions and Proceedings of the American Philological Association*, XLIX (1918), 101, 112-113; Klaus Hansen, "Reim- und Ablautverdoppelungen", *Zeitschrift für Anglistik und Amerikanistik*, XII (1964), 5-31; "Makkaronische Sprachformen-Hybride Wortbildungen", *ibid.*, IX (1961), 49-64 (especially at 55).

[7] Gustav Kirchner, "Der Reimklang im Englischen", *ZAA*, IV (1956), 389-447; "Der Reimklang im Englischen (Nachträge)", *ZAA*, VII (1959), 281-287.

[8] Rime is also the primary factor in the formations by analogy, e.g., *cancer-schmancer, fancy-schmancy*. "Revolution-Shmevolution", *NYT* 12 Jan,. 68, p. 64/6-8 (Headline) to article by Scott Eledge; the word does not occur in the body of article. See Leo Spitzer, "Confusion Schmooshun", *Journal English and Germanic Philology*, LXI (1952), 226-233.

[9] "American Fiction", *Saturday Review of Literature*, II (Aug. 1, 1925), 1-3.

flip-flop, for example, being four centuries old [*OED* ca. 1529] when Mrs. Woolf was writing.

Of the following list, some twenty-five reduplicatives still in common use had appeared before 1600:

1292 hotchpotch (legal term, Britton)	1556 twittle-twattle
1362 (-1377) handy-dandy (*Piers Plowman* A,B,C Texts)	1557 fiddle-faddle
	1560 ding-dong
1374 teeter-totter	1579 pell-mell
1382 wagger (in 1582 as wigway)	1593 helter-skelter
1385 tee hee, (Chaucer, *Miller's Tale*)	1593 higgledy-piggledy
1425 pitter patter	1601 hobnob
1426 hodge-podge	1605 fanfare
1450 mishmash	1610 tag and rag
1483 linsey-woolsey	1618 chit-chat
1500 hirdy-girdy	1624 hocus-pocus
1526 heyda(y)	1653 trictrac (backgammon)
1529 flip-flop	1686 jiggery-pokery (jawkery-pawkery)
1530 hurly-burly	1702 tip top
1530 topsy-turvy	1712 zigzag
1535 ragtag	1726 Namby-Pamby
1538 flimflam	1727 claptrap
1550 dibble-dabble	1789 squish-squash
1550 humdrum	1841 hanky panky
1555 hubbub	

While semantic overtones may be related to the form, meanings are not determined by the form.[10] An echoic reduplicative, for example, is not necessarily iterative, but may be formed alternatively by ablaut or rhyme. Accepted iteration, moreover, need not be exact (e.g., *cluck-cluck*), but may be asymmetrical (*cluck-clucky*), or with an intrusive syllable or syllables (*cluckety-cluck*). The semantic sphere of echoics by definition has been presumed to be limited and precise. For speakers of English there does appear to be a perceptible harmony between sound and sense in such nursery words as *baa-baa*, *bow-wow*, *cluck-cluck*, *choo-choo*, *ding-dong*, and in the adult extension to *ack-ack*, *beep-beep*, *bleep-bleep*, *flip-flop*, *ping-pong*, *pitty-pat(ter)*, *put-put*, *tom-tom* of modern weaponry, machinery, sirens, games. The riotous bustle of jazz in crude onomatopoeia pounds its empathetic rhythms in such phrases as *boo-boop-a-doop*, *ha-cha*, *oompah-oompah*, *razz-ma-tazz*. Yet with our present awareness of the complex of psychology and aesthetics, we recognize that among all the

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[10] A. Fröhlich, "Zusammenhang zwischen 'Lautform' und 'Bedeutung' bei englischen Wörteren", *Die neueren Sprachen*, XXIII (1925), 27-42, 127-141.

words in this paragraph, echoic association of sounds with sense is less imitative and more arbitrary than had been supposed.[11] The present descriptive sound value of most 'echoics' has been acquired not primarily by intrinsic appropriateness of sound, but by association-context. This would explain an interesting phenomenon — why certain identical reduplicatives by the very fact of the iteration secure both intensity and extension of meaning, e.g., *go-go, goody-goody, never-never, so-so* while another group of identical reduplicatives with the same types of phonemes for us convey little or no extension of meaning but a light emotional flavor. Such 'borrowings' are the 'exotic' (i.e. non-IE) reduplicatives — naming clothing, ideas, games: *bubu, muu muu, sing sing, tom tom.* A few iterative loans show change of one phoneme: *guru, lava lava, rongo rongo, tric trac.*

The ablaut reduplicatives (category 2, change of internal vowel) include: *chit-chat, dibble-dabble, ding-dong, fiddle-faddle, flim flam, flip-flop, mish-mash, nettering nattering, see-saw, teeter-totter, tiptop, topsy-turvy, twaddle-twitter, wigwag, wishy-washy, zigzag.* Many of these have existed for centuries, can indeed claim so long a history that the derived 'gradational' form itself acquired ages ago the status of a separate entity — with the result that half the words look like mere compounds, e.g., *flip-flop, teeter-totter, tip-top, twaddle-twitter, wigwag, wishy-washy.*

The rhyming reduplicates (category 3, structured by rhyme) comprise: *handy-dandy, heyday, higgledy-piggledy, hodge-podge (hotch-potch), hubbub, hugger-mugger, humdrum, hirdy-girdy (hurdy-gurdy), hurly-burly, rag tag, razzle-dazzle.* (I omit here *even Steven, linsey-woolsey,* and *walkie-talkie,* rhyming compounds which look like reduplicatives although technically they are not.) Among rhyming reduplicates are included multiple rhymes (e.g., *helter-skelter, higgledy-piggledy*) and mere suffix-rhymes (e.g., *pitter-patter*), usually suffixes -er, -ly, -y, -le (dle). The disyllabic rhymes add to the diversity of normal rhyme other elements of identity. The first syllables are stressed and form an ordinary rhyming pair. They are followed by completely identical unstressed syllables. These endings, often hypocoristic, generate the same kind of rhythm and lighthearted reaction that feminine rhyme does in humorous and satiric verse.

The above juxtapositions into form-categories and the process of word formation dramatize the thrust of the associative-context on the connotative aura. It has often been observed that reduplicatives deal with confusion and disorder — *helter-skelter, higgledy-piggledy, hodge-podge, hurly-burly, mish-mash, topsy-turvy*; trivialities — *chit-chat, pitter-patter, twaddle-twitter, so-so*; petty pomposity, and incompetence — *flubdub, fuddy-duddy*; deceit, trickery, or secrecy — *handy-dandy, hanky-panky, hugger-mugger, jiggery-jawkery, razzle-dazzle.*

The idiosyncracy of the reduplicative is this semantic-symbolic acceptance of con-

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[11]   Those who sought to explain the very origin of language itself by the echoic theory were apparently not disconcerted by the knowledge that American bells *ding-dong,* the Spanish *tin-tin,* and German *bim-bam-bum* (or that American cats *meow-meow* while the French cats *minn, minn* — and no doubt with a heavy French nasality).

fusion, noise, incompetence, and deceit. This indulgence, though patronizing, is altogether genial and cheerful. It may be that in its peculiar "antisocial" tolerance of the topsy-turvy or absurd lies its offense against socially refined taste. And it may be that in its seeming linguistic rebellion lies its appeal to the young and defiant. The ironic paradox is that most of these words are very old.

Most reduplicatives hover on the outskirts of 'standard' speech, outside the sanctity of inclusion in the desk dictionaries. Over the centuries only a few reduplicatives have become wholly legitimized in 'received standard' English vocabulary. These are words which acquired a distinct and special meaning. Even these words, despite a long and respectable genealogy, still retain overtones of their humorously tainted inheritance (e.g., *fanfare, heyday, hubbub, hirdy-girdy, humdrum, teeter-totter*).

Slang reduplicatives (a 'fugitive cant') make up a considerable portion of the list. A large number are new creations, perhaps nonce words. These reduplicative neologisms, sometimes twisted into puns, exploit double-meanings. The wit and humor come in part from the pun, but also from the aping creation by analogy of the characteristic forms of the reduplicative — doubling, ablaut (and alliteration), rhyme. Illustrations abound: *frazzle-dazzle* (play on *razzle-dazzle*); Jap trap (play on claptrap); *kitchy-kitchy coup*; *kooky-yacky*; *lub-dubbed* (play on *flubdub*); *ranky-pranky* (a play on *hanky-panky*); *rinky-dink*; *squish-squash*; *Teazy-Weazy* (play on *teeny-weeny*); *whirly-twirly* (reverse of *twirlie-whirlie*); *yakety-yak* (play on *clackety-clack*).

Reduplicatives in *NYT* appear almost exclusively in direct quotations or in signed articles. Their use is limited to special news features, fashions, reviews of the arts, of books, or of entertainment. Where the tone is serious and thoughtful, the incongruous use of a reduplicative with its unexpected frivolity disparages or minimizes the importance of the subject.[12] The literary method is effective to evoke powerful associations, the contrast in the reviewer's literary style obvious, the implicit criticism deliberately damaging. One *NYT* review of a film comprehensively summarizes in caustic language "the dismays of a bland young man fresh out of college who is plunged headlong into the intellectual vacuum of his affluent parents' circle of friends" before it concludes with praise for an actor and actress in the cast who "fairly set your teeth on edge as the *ha-cha*, insensitive parents of the lonely young man." Another, more scathing rebuke appears in the simple use of a reduplicative in a book review:

As Mr. McLuhan says: "All media work us over completely. They are so persuasive in their personal, political, esthetic, psychological, moral, ethical and social consequences that they leave no part of us untouched, unaffected, unaltered. The medium is the massage."

So, down to the nitty-gritty. "The medium, or process, of our time — electric technology — is reshaping and restructuring patterns of social interdependence and every aspect of our personal life," Mr. McLuhan writes.

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[12]   Only sporadically is there a use — essentially onomatopoeic — which is not disparaging: an overseas comment reports a *bleep-bleep*; a caption for a child-care center tactfully adopts baby-talk; a new electronic device is described by its *flip-flops*.

Like *NYT*, *Time* limits its reduplicatives and uses them in the same areas. *Time*, however, reduplicates more intensely in its frivolity or condescension toward the subject. Unlike *NYT*, where the shock is generated by a solitary, almost chaste reduplicative, *Time* piles them up. A typical example illustrates the method. In the cinema section of *Time*, 16 November, 1966, p. 122, the tranquilized protagonist of a movie sits with his "trank-tanked wife"; the character in a film reviewed on the next page is a 'chick chick'; the same page also describes a film director as a "switchblock Hitchcock" manipulating a "jittery-tittery comedy of terrors" whose villain is a 'crumbum'. Overwhelming are three reduplicatives and rhyming compounds in a single paragraph, commingled, as they are, with slang and metaphoric extension of echoic words transmogrified into timely puns.

Again, even more recently, in a *Time* television review, 8 March 1968, p. 65/2-3:

All the Hollywood *hotshots* said it couldn't be done ... so when the show debuted ..., it came on like a *fanfare* at a funeral... *Bang Bang*. What makes Laugh-In laughable is not so much the material as the free-wheeling, *pell-mell* pace at which it is dished out. One-liners fly like *ack-ack*, and if there are more than a few duds it is hard to tell in the thick of the barrage. Everybody wings in ... Much of what goes on is vintage burlesque — blackouts, slapstick, even *knock-knock* jokes.

One can respond to the exaggerated wit, the massage, while quite overlooking the message.

All in all, the dictionary adjudications (possibly cause as much as effect) are affirmed by the current usage of reduplicatives. The real test of their status is the company they keep. Where the intellectual content is important and the attitude deliberative, reduplicatives rarely appear, and their rare appearance is designed to lighten the tone, to mock or to shock. Reduplicatives may tease and titillate, relax and refresh, pit and pat — but they remain, as two centuries ago Samuel Johnson sensed, too indiscriminate for the accurate, "too gross for the delicate".

JOTHAM JOHNSON

ROUGH BREATHINGS AS ACROPHONIC NUMERALS*

Thanks to the Athenians' habit of carving, on fine white marble, custodians' accounts, treasurers' records, and auditors' affidavits, we are particularly well-informed of the numeral system employed in Classical Athens.

In the table at the end of this paper, I show, in line 1, the decimal series in use in fifth-century Attica. As you can see, this is an acrophonic system, the symbols of the numbers being the initials of their names, except the curious symbol for one drachma for which no satisfactory explanation has hitherto been published. Observe also the survival of the symbol which for convenience I shall call H, which after the adoption at Athens of the Ionic alphabet represented *eta*, but which in the fifth century still represented the unvoiced glottal spirant, later represented by the *spiritus asper* or 'rough breathing'.

Perhaps it would be more accurate to describe this series as a quinary series: As you see in lines 4 and 5, the acrophonic numerals for 10, 100, and 1,000 can be ligatured with Γ, πέντε, to express 50, 500, and 5,000.

For sums amounting to 6,000 drachmas or more a larger unit is employed, the τάλαντον or talent, equal to 6,000 drachmas, represented acrophonically by the symbol T. As you see in lines 6 and 7, T may be ligatured with numerals from the basic series to represent 5 talents or 30,000 drachmas, 10 talents or 60,000 drachmas, 50 talents or 300,000 drachmas, and so on.

For sums of less than one drachma, the unit is the obol, in Greek ὀβελός or ὀβολός, 'spit'. In Greek currency the drachma may be either eight obols or six; in Attica it is six. In line 8 I show, first, two symbols for ὀβολός, 0 which is clearly acrophonic, and | which not only is a most obvious symbol of unity but at the same time is pictographic, for it forms a tolerably accurate representation of an ὀβελός or spit such as one might use for *souvlakia*. Besides, it is much easier for the stone-cutter to carve than the awkward *omicron*, and at Athens quite drove out 0 as a symbol of the obol. The other symbols in line 8 represent the ἡμιοβόλιον or half-obol,

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usually explained as the left-hand half of the acrophonic 0 of ὀβολός; the τεταρτημόριον or quarter-obol, represented sometimes by a reversed ⊂, explained as the other half of the bisected 0 of ὀβολός, sometimes by T which can only be acrophonic; and the χαλκοῦς or eighth-obol, represented by the acrophonic X.

While these numerals are fairly cumbersome for large sums, the Athenians did not hesitate to use them to express very large sums indeed, as in line 10, a sum actually encountered in an inscription, *I. G.* I² 324, dating from the Peloponnesian War, 4,777 Talents, 3,323 Drachmas, 2 Obols, or 28,665,323 1/3 drachmas.

In line 11 I have transcribed the acrophonic numerals as they appear on stone counting-tables or abaci. The famous marble abacus from Salamis published by Rangabe in 1846 shows this series three times, twice as you see it here, the third time augmented by Ⱶ and T. An identical series appears on an abacus from the Amphiareion of Oropos, one of five found at that sanctuary and published by Leonardos in 1926.

All these symbols have been explained acrophonically except the symbol for one drachma, one of the two symbols for ὀβολός, the symbol for ἡμιοβόλιον, and the reversed C which appears as one of two symbols for the τεταρτημόριον or quarter-obol. It is my purpose here to persuade you that the symbols for one drachma and for the half-obol are also acrophonic and that the acrophonic series exists complete and unbroken from one-eighth obol to one thousand talents.

The 'rough' and 'smooth' breathings are said to have originated in the vertical section of H into Ⱶ and ⊣, the left-hand half thereafter representing the *spiritus asper* or "rough breathing" heard for instance in *h*εκατόν, the right-hand half the smooth breathing or absence of audible sound. We are also told that it was apparently Aristophanes of Byzantium, the scholar who about 194 B.C. succeeded Eratosthenes as director of the Institute for Advanced Study at Alexandria, who adopted these symbols for grammatical purposes.

Nevertheless, Ⱶ representing the *h* heard, e.g., in *h*εκατόν appears as early as the fourth century B.C. in Greek inscriptions at Tarentum and her colony Heraclea, and also in a number of fourth-century South Italian vase-inscriptions.

When we encounter, in an acrophonic series, representing a number whose name may have *h* as its initial sound, a symbol which may represent the sound of *h*, it seems to me to be sheer perverseness not to associate the two. I accordingly suggest that the Ⱶ which stands for one drachma in the acrophonic series is a symbol of *h*, the initial aspirate of *h*εῖς or *h*έν 'one'.

I suppose that what has blinded the eyes of epigraphers, grammarians, and numerologists to this identification is that because δραχμή is feminine scholars have expected an acrophone not of *h*εῖς or *h*έν but of the feminine μία. But unity is a concept by itself, and I would regard it as amazing if we were to find in use two dissimilar symbols for unity, one used for items of masculine or neuter gender, the other for feminine. In any case, for Aristotle unity is neuter, τὸ ἕν (*Metaphysics*

986a15), and in the *Gospel According to St. John* (10.30) Jesus is quoted as saying ἐγὼ καὶ ὁ πατὴρ ἕν ἐσμεν, "I and my Father are One".

Support for this suggestion is furnished by the acrophonic numeral series in use in the Tauric Chersonese, where the symbol ⊢ again appears to have the value *h*; at least, it is found representing a number whose acrophone is *h*; but there it is not the acrophone of ℎεῖς ℎέν; instead, it represents the *h* of ℎεκατόν.

If it is correct that ⊢ in the Attic numeral series is acrophonic and represents the initial phoneme of *ℎέν*, this pushes the date of the bisecting of H back into the fifth century. Other than its frequent appearance in treasurers' accounts, I know of no fifth-century occurrences of ⊢ unless we accept an interesting emendation proposed long ago by Blass, who pointed out that two otherwise unintelligible passages in Plato, *Cratylus* 412A and 437A, can be resolved by substituting for EI of the manuscripts the symbol ⊢. In any event my feeling is that we have really no choice but to accept ⊢ as an acrophonic numeral having the value of *h*, the rough breathing.

But now let us look at the symbol which represents the ἡμιοβόλιον, the half-obol, after 1 drachma the only number in the entire series not provided with a symbol generally recognized and accepted as acrophonic.

In Attic epigraphy, as we have already noticed, the obol is represented by the acrophonic 0 or the pictographic I, the half-obol by C, explained as the left-hand half of a vertically bisected *omicron*. Since the bisection of H provides a precedent of a sort, I suppose we are not compelled to seek an alternate explanation, and apparently no one has bothered to seek further.

Nevertheless I would like to invite your attention to the later fate of the two halves of H, which, if we trust the testimony of the grammarians, became first ∟ ⅃ , then < >, then the forms ⊂ ⊃ which you will recognize as the end product of cursive script and the progenitors of the rough and smooth breathings now printed in our texts.

I would like you to consider the possibility that it may be more than just a coincidence that C, as the symbol for the ἡμιοβόλιον, may be explained as representing *either* the left-hand half of a vertically-bisected *omicron*, *or* the end product of ⊢ in cursive script. In fact, I am persuaded that the use of the symbol C to represent the ἡμιοβόλιον or half-obol has its origins in the fact that this symbol was already in the fifth century familiar as an alternate form of H and ⊢, used to represent the phoneme *h*.

Assuming that this supposition is correct, it should not surprise us to find that in other acrophonic series C is found representing other amounts whose initial sound is *h*. In acrophonic numeral series assembled by Marcus N. Tod from Troezen in the Peloponnese, Chalcedon on the sea of Marmora, and the Tauric Chersonese, C stands not for the half-obol but for one drachma, and at Troezen the symbol for five drachmas is Ⅽ̅. Furthermore, at Epidaurus, Thespiai, Delos, Nemea, Andania, Erythrai, and on the famous Darius Vase from South Italy the symbol

for the ἡμιβόλιον or half-obol is <, which is not so plausibly explained as half
of a bisected *omicron*; instead, it is one of the forms encountered as a transitional
form between ∟ and C. But again, if < is acrophonic, an alternative to H, Ⱶ, and
C, we should not require that its use be limited to representing the acrophone of
*h*ημιβόλιον; and indeed, at Tegea in the Peloponnesus < represents one drachma,
and Ⱶ represents five drachmas.

A methodical prowl among the acrophonic numeral series of the lands settled
by the Greeks will turn up many variations. At Nesus another unit of currency
whose acrophone is *h*, the *h*ημιστατήρ or half-stater, is represented by ∟, another
symbol encountered among the fragments of H. At Naxos the half-obol is represented
by Γ, explainable, if you like, as the *lower* half of Ⱶ; at Troezen, where as we just
saw the drachma is represented by C, the half-obol is represented by ˥, whereas
at Carystos in Euboea ˥ represents 100 drachmas. Since these appear to be the
lower half of ˧, the *smooth* breathing, perhaps we ought merely to sweep it into a
closet and go on about our business; but it *is* worth noting that wherever a number
or a coin begins with *h*, it is invariably represented by H, Ⱶ, or some other one of the
fragments, or cursive end-products of the fragments, of H.

1.	Ⱶ	△	H	Χ	Μ
2.		Δέκα	Ηεκατόν	Χίλιαι	Μύριαι
3.		10	100	1,000	10,000

4.	Γ	⟨Δ⟩	⟨H⟩	⟨Χ⟩
5.	Πέντε	50	500	5,000

6.	Τ	⟨Τ⟩	△	⟨Δ⟩	H⊦	⟨H⟩	Χ
7.	Τάλαντον	30,000	60,000	300,000	600,000	3,000,000	6,000,000

8.	ΟΙ	C	⊃Τ	Χ
9.	Ὀβολός	Ἡμιβόλιον	Τεταρτημόριον	Χαλκοῦς

10. ΧΧΧ⟨Τ⟩ΗΗ⟨H⟩ＦＦ⟨Τ⟩ΤΤΧΧΧΗΗΗ△△⊦⊦ΙΙ   Dr. 28,665,323, Ob. 2

11. Χ⟨Τ⟩H⟨Δ⟩△ΓⱵΙCΤΧ

12. H Ⱶ ⌐⌐ <> C⊃   ⟨Τ⟩ ⟨Δ⟩ ⌐˥

Someone may ask, If Greek calculators could use acrophonic T for both τεταρτημόριον, the quarter-obol, and its big cousin, the talent, and X for both the eighth-obol and 1000 drachmas, why did they bother to develop *three* symbols for three amounts which began with *h*, *h*εκατόν, *h*έν, and *h*μιοβόλιον? The answer is, that the context could be counted on to help the reader to distinguish between amounts so divergent as 6,000 drachmas and a quarter-obol, or 1,000 drachmas and an eighth-obol; but the context could *not* invariably be depended on to distinguish between *h* '100 drachmas', *h* 'one drachma', and *h* 'half-obol'. The possibility of ambiguity persisted, and it was met by the development of distinct symbols, all forms of H and its congeners. With the identification of ⊢, C and < as alternate forms of H, the acrophonic series at Athens, and at many other cities, is complete.

Post-Script. I have made no attempt to assemble all examples of the symbol ⊢ and its derivatives where it appears with other than numeral values. It appears in Linear A, with a phonemic value not yet ascertained; in Linear B, where it had the value *da*; in the Cypriote syllabary, where it had the value *ta*; in the Boeotian script, where at one time it stood for close E, later for I; in Greek musical notation, where its explanation will have to await a more sophisticated understanding of Greek music; at Delos, where ⊢ *precedes* numeral series as the $ precedes dollar notations, deriving presumably from its use to denote the unit; and at Rome, where Claudius unsuccessfully introduced it to represent a speech sound intermediate between -*i*- in *strictus* and *e* in *sectus*, heard, to judge from its rare appearance in epigraphical contexts, in such words as OPT⊢MVS, AEG⊢PTI, G⊢BERNATOR.

ALVIN KESSLER

AREAL LINGUISTICS

The mechanisms responsible for phylogenetic change in language are of two kinds — the one produced by internal, the other by external causes. The internal changes link language with presumed universals such as phonetic plausibility and internal structural pressure. The external changes, on the other hand, are a function of contact between peoples and link language with historical processes such as political and social revolution or foreign conquest. Traditionally, these latter changes have been subsumed by linguists under the general heading of *borrowing*. At the same time, it has become known that certain well-defined linguistic traits are shared in common in equally well-defined geographic areas by languages irrespective of their genetic affiliation. From what has been gleaned from records or reconstruction, such areal characteristics are acquired through change, presumably as the linguistic concomitant of cultural contact. "Language contact and culture contact universally result in the transfer of elements from one system to the other.... This transfer of elements produces systemic change which might be called *convergent*, since it involves a degree of merging between two separate systems."[1] "The adaptive process is no doubt connected with bilingualism and language learning in the border zones or in the path of a language which spreads at the expense of another."[2] It is important to note that the comparatively revolutionary effects of *convergent change* can usually be distinguished from the evolutionary effects of *divergent change*. Divergent change operates within a system and is largely observed to produce internal systemic change, either between two historical stages of the same language or between an ancestral proto-language and descendant daughter languages. Von Wartburg, commenting on the importance of areal trends, remarks: "Zweifellos ist also die Sprachmischung, das Nebeneinanderleben und die Auseinandersetzung mehrerer Sprachen auf dem gleichen Boden, der Wechsel der Sprache durch einen grossen Teil der Bevolkerung eine der wichigsten Ursachen der Lautwandlungen."[3]

[1] A. Richard Diebold, Jr., "Incipient Bilingualism", *Language*, 37.97 (1961).
[2] Henry Hoeningswald, *Language Change and Linguistic Reconstruction* (Chicago, 1960), p. 82.
[3] Walter Von Wartburg, *Einfuhrung in Problematik und Methodik der Sprachwissenschaft* (Halle, 1943), p. 42.

That the recognition of areal trends and the cross genetic effect of languages have been known for a considerable length of time is attested to by the writings of early cultural anthropologists and linguists. Kroeber, in a paper entitled "Native Indian Language of California" (*American Anthropologist*, 5.2 [1903]), posited what can well be considered grammatically based linguistic areas, and the principle of areal relationship is explicit:

A principle that appears prominent in the facts that have been presented is that of territorial continuity of characteristics. A feature is rarely found in only one language. When it does occur in several stocks as is usually the case, these are not scattered at random and more or less detached from each other, but generally form a continuous or nearly continuous area, however irregular it may be. This principle applies as well to types of languages as to single characteristics.

Franz Boas, also concerning himself with American Indian languages of the North Pacific coast of North America, found implicit in them the diffusion of linguistic traits across genetic boundaries. In *Language* (5.6 [1929]) he states that in a great number of these areas " ... we find, notwithstanding fundamental differences in structure and vocabulary similarities in particular, grammatical features distributed in such a way that neighboring languages show striking similarities.... It seems ... almost impossible to explain this phenomenon without assuming the diffusion of grammatical processes over contiguous areas." In an introductory paper to the first issue of *International Journal of American Linguistics* (1.1-8 [1917]), Boas had pointed to evidences of phonetic areas in these same American Indian languages. These phonetic areas comprised genetically unrelated languages which shared nasalized vowels or glottalized stops or elaborate development of labials or a paucity of labials or trilled consonants. He concluded that the sound system of a given language changes through borrowings from neighboring languages. Such social phenomena as marriage or capture of foreign wives introduce a persistent foreign influence, especially on growing children. De Saussure, in his *Cours de Linguistique Générale* (translated by Wade Baskin, New York, 1969, p. 211), in dealing with the spread of linguistic waves, commented:

Vastly different are the relations of languages on continuous territory. These common traits are not necessarily older than the traits that differentiate them. Indeed, an innovation that starts at a given point may spread at any moment and even embrace the whole territory.

Meillet, in his *Linguistique Historique et Linguistique Générale*, devotes a whole chapter (pp. 61-75) to the convergence of linguistic developments. He differentiates in Indo-European between the "parallélisme des changements de structure générale" and the "divergence des innovations portant sur les moyens matériels d'expression". Although admittedly he does not attribute any parallelisms which he finds in Indo-European to areal trends, it is interesting to note that on commenting on parallel developments in Slavic he does admit "... quelques-unes de ses innovations, comme elle qui porte sur les formes employées avec les noms de nombre sont inattendues au plus haut point...".

It remained, however, for the Prague School to also develop explanations on linguistic areas similar to those of Boas. Jakobson, in *International Journal of American Linguistics* (10.193 [1944]), puts forth his own parallel ideas:

Evidently unrelated but contiguous languages frequently manifest a range of common features in their grammatical and phonemic structure. Grammatical and phonemic peculiarities are distributed over large continuous areas and spread over one part of some related language (or one part of some single language) without extending to the other part. Certain grammatical and phonemic types have a wide continuous distribution without corresponding lexical similarities. Some neighboring languages with similar phonemic features are morphologically quite distinct and vice versa. The areas of single grammatical or phonemic features do not coincide, so that one and the same language happens to be linked by different features with different languages.

In the official publication of the Prague School, *Travaux du Cercle Linguistique de Prague* (4.234-40 [1931]), Jakobson employs the word "Sprachbunde" (the credit for coining of the word, however, apparently goes to Trubetskoy) for those areas sharing common phonological traits, but Henrik Backer, in *Der Sprachbund* (Berlin and Leipzig, 1948), has the best treatment on the subject. The term *Sprachbund*, however, proves itself unsatisfactory because it implies *a priori* membership in such a unit. The proposed English term 'affinity' has serious drawbacks, too, as it implies the defining property of a group of languages rather than the class of languages itself.[4] Emeneau, in *Language* (32.1-16 [1956]), has an extremely lucid account of a convergence area and the principles involved and proposes the term "linguistic area." This term, however, had been used previously in the same sense by H.V. Velten as a translation of *Sprachbund*, in *Pacific Northwest Quarterly* (34.271-92 [1943]). Emeneau (p. 16 ff.) states that a linguistic area is "an area which includes languages belonging to more than one language family but showing traits in common which are found not to belong to the other members of at least one of the families". Because the term has a distinct disadvantage in the lack of an adjective and the fact that the term 'areal linguistics' is preempted by the Italian neolinguistic school in another sense, Weinreich's term "convergence areas" in *Word* (14.379 ff. [1958]) seems a better choice. Certainly it is the most specifically meaningful, as different types of convergent change can be correlated with different types of areas.

The languages of the Balkan area seem especially suitable to an investigation of convergent change. The representatives include: Greek, Albanian, Bulgarian, Serbian, Roumanian, and Turkish (Osman). While all but the last are members of the Indo-European language family, some quite different branches are involved. Modern Greek is the direct descendant of ancient Greek. Albanian itself occupies a separate branch according to comparativists. Bulgarian and Serbian belong to the Slavic branch while Roumanian is a Romance language like French, Spanish, Italian, etc. Very striking, for example, is the fact that Albanian, Bulgarian and Roumanian

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[4]   Uriel Weinreich, "On the Compatibility of Genetic Relationship and Convergent Development", *Word*, 14.379 (1958).

agree in a construction consisting of the postposition of the definite article. A comparative examination of all three languages seems to preclude the possibility of an independent development in each, for "... elles ne concordent pas seulement dans la postposition, mais aussi dans beaucoup de cas dans l'emploi de l'article".[5] Another striking illustration is the partial or complete lack of the infinitive and its replacement by periphrastic constructions in Greek, Albanian, Serbian, Bulgarian, and Roumanian, although to different degrees. This in itself is not a remarkable phenomenon, but what is noteworthy is "... le fait que toutes les langues en question l'ont remplacé exactement de la même façon. Cette manière de voir a été jusqu'ici généralement adoptée."[6]

Other probable examples of convergent change include: the formation of the future employing the verb 'want', common to Greek, Southern Albanian, Bulgarian, Serbo-Croatian and Roumanian, which Sandfeld sees as spreading from Greek; and the falling together of the genitive and dative cases in Greek, Roumanian, and Albanian, although in the first instance it was an ancient genitive which became a dative and in the other two an ancient dative which became a genitive.

Even more convincing is the case which the subcontinent of India[7] presents for convergent change. These three major language families, Indo-Aryan (a sub-family of Indo-European), Dravidian, and Munda are well represented and offer a considerable time-depth in the material involved. Moreover, both Indo-Aryan and Dravidian provide substantial historical information as well. All three language families "... show constructions in which verb stems or non-finite verb forms are strung together in a series which are closed by a finite verb form (or other predicate ender)".[8] Structural effects across genetic boundaries is especially well supported by the presence of retroflex stops in most of the languages of India. Retroflex stops are not an Indo-European phenomenon:

... it is a matter of utmust certainty that retroflexes in contrast with dentals are proto-Dravidian in origin ... In Southern Dravidian, moreover, several languages have three phonemic series in the front of the mouth — dental, alveolar, retroflex.... The comparative evidence looks to similar distinctions in proto-Dravidian. This being so for Dravidian, it is beyond doubt that even where Indo-European material yields Sanskrit retroflexes, pre-Indo-Aryan and pre-Davidian bilingualism provided the conditions which allowed pre-Indo-Aryan allophones to be redistributed as retroflex phonemes. Certainly as time went on, Middle Indo-Aryan showed many more such phonemes than old Indo-Aryan, and in consequence modern Indo-Aryan does so too. This is a clear instance of Indianization of the Indo-European component in the Indic linguistic scene.[9]

Other indications occurring in all three language families but not so widespread are: constructions based on a nominalized or adjectivized form of a verb (more properly of a predication ending in a verb) followed by a post-position; the presence of echo-

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[5] Kristian Sandfeld, *Linguistique Balkanique* (Paris, 1930), p. 168.
[6] *Ibid.*, p. 175.
[7] I.e., ignoring the political division into the Republic of India and Pakistan.
[8] Murray B. Emeneau, "India as a Linguistic Area", *Language*, 32.9 (1956).
[9] *Ibid.*, p. 7.

word construction; and, the use of classifiers or quantifiers. The first two are non-Aryan (and non-Indo-European) in origin and also indicate an Indianization process. The third, although a non-Indo-European phenomenon, is thought to have spread from Indo-Aryan to the other families.

The end result of this cross genetic effect has led Emeneau to conclude: "... the languages of the two families, Indo-Aryan and Dravidian, seem in many respects more akin to one another than Indo-Aryan does to the other Indo-European languages".[10]

A special and far more extensive type of convergent change is in evidence in the Creolized languages of the Caribbean area, such as Haitian Creole, Dominican Creole, and Sranan Tongo. A creolized language results when a pidgin language comes to be employed as a first language. It represents an extreme of convergent change in that "... a new third language crystallizes as a modification of the dominant language through imperfect replication by speakers of the lower language".[11] Pidgins and creoles have been known to grow up in remarkably short periods of time as a result of the practical necessities of achieving some sort of mutual intelligibility between the unintelligible speeches of master and slave, especially as induced by a commercial situation. "The restructurings which take place in these instances are very brusque and violent and take place very fast, as compared with what we customarily consider 'gradual' changes over the centuries."[12] But, in spite of its highly aberrant development, Haitian Creole, for example, can be identified as a variety of Northern French with Indo-European-like structure, although there also seems to be present structural evidences of an African substratum. Thus, in its morphology, Romance-type derivational patterns in conjugation are a feature. Syntactically, a fixed word order consisting of subject and predicate as well as the replaceability of word by word group also point to Indo-European structure. And, according to Weinreich, "Creole morphemes ... satisfy the definition of cognates with respect to French."[13] On the other hand, many grammatical processes, in particular, inflectional endings, show an African influence.

From the different levels of convergent development illustrated by the three areas, it would appear to be feasible to posit (at least) two typological categories of convergent change corresponding to the pervasive character of the convergences involved. It seems fairly certain that creolized languages would therefore occupy a position at one end of the spectrum. Where other types of areal convergences would fit in, and what the criteria for distinguishing between them should be, remain worthy subjects for future study as indeed does the phenomenon itself.

RCA, COMPUTER SYSTEMS DIVISION, NEW JERSEY

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[10]   *Ibid.*, p. 16. Emeneau might well have mentioned Sinhalese as a prime example.
[11]   Diebold, p. 109.
[12]   Robert A. Hall, Jr., "Creolized Languages and 'Genetic Relationships' ", *Word*, 14. 369 (1958).
[13]   *Ibid.*, p. 377.

HAROLD KIRSHNER

WORD PLAY IN ENGLISH ADVERTISING

"Take Courage!"
"Get Younger Every Day!"
"It's Brain's You Want!"

These encouraging and discouraging exhortations all refer to brands of beer. What is interesting is that Courage, Younger, and Brain are all the names of the owners of the beer companies. They were shouted at me from advertising posters in London and Cardiff. I was also informed by a poster on a bus, "Our binoculars are good lookers", and similarly by the National Egg Board to "Go to Work on an Egg".

I had not been in London very long recently when I was struck by the amount and variety of word play in the advertising that surrounded me and I decided to collect material on it. My impression was strongly reinforced by the contrast I found when I crossed to the Continent a few weeks later.

It is well known that there has been a very strong tradition of punning and word play in English for hundreds of years. Of course, all poetry among all peoples has used any or a combination of 'play' with language that includes the phonological, morphological, syntactic, historical (that is, etymological), and semantic. What is attained thereby is the richness of communication that comes from several levels, including especially the combination of the intellectual and the emotional. In this respect poetry and advertising share a quality. But the technique of word play in advertising seems to be a particularly English phenomenon. Here I mean English as a language and not only British: word play is a very important aspect of American advertising as well, but this is not part of the present study.

During four weeks in London, with short trips to parts of the west country and Cardiff, I recorded 32 clear instances of word play in poster advertising. I made no special effort to collect items: I tried as much as possible to be an 'average person'. I realized also that in traveling, opportunities could not always be equal, so that casual contact was the best basis for uniformity in gathering data. What might be called passivity is, after all, the normal condition of the subject to which advertising appeals. I used the same approach on the Continent. There I spent a total of nearly six weeks: nearly three in Basel, two in Florence and Rome, and one in Paris. The

distribution was German, 7; Italian, 6; French 5. A general comparison shows that in about 50% *more* time on the Continent I found there only about 50% of the quantity I had found in Britain.

I shall now confine myself to an analysis of the English advertising.

The types of word play fall into two major categories: puns and alliteration. Both types occur together, reinforcing each other, and either or both may be reinforced by the visual. On the Continent the emphasis is strongly on the visual, the verbal consisting only in the name of the product or a short phrase in addition.

Rime is strangely absent from the English. But I found it in three out of the seven German items, four out of the six Italian, and one of the five French. If rime is word play, it must be of a rather different type.

The simplest English form is just alliteration: "Guiness is Good for You". "Players, Please" (cigarettes). "Haig in Every Home". The feeling for word play seems to be so strong that it is not confined to commercial advertising. In a women's dress shop window I saw a small hand-lettered sign that read, "Be Wise, Bewitch".

Then we have pun and alliteration combinations: "Trubrown brewed by Truman". This leads to a subtype of fully artificial name pun: "Cupid Brassiere by Miss Twilfit". Simple puns are: "Smith's (potato chips) Has the Crispness in the Bag". But they don't let it go at that. The IT in Smith's is capitalized but the other letters are not, making the word IT stand out. Similarly, Grain's capitalizes the AI as A-1; and A-1 is also a major motor road out of London. The name of a sea-food restaurant on the Thames near Kingston is "The Contented Pl*ai*ce". Another non-commercial hand-lettered sign in a beauty shop said, "Let Beauty Go to Your Head". In a railway station a poster said, "First Class Reading All Along the Line". And this was advertising the *Daily Express*. A billboard showed a man lighting up. It was advertising Richmond cigarettes, saying, "Strike It Rich". An advertisement by the Strong beer company said, "You're in Strong Country". That goes Marlboro one better. "Bisks (a reducing biscuit) makes slimming diets *bare*able", with the inevitable lithe woman in a bikini. Alliteration and a pun occur in "Face the Future With Pearl Assurance", and rays of light surround the word Pearl.

Some go pretty far. Picture of a bottle lying on its side: "This Clayton Tomato Juice Is Dead. It Gave its All For Mary. Bloody, Isn't It?" Bloody at least used to be a rather strong word. Is this another sign of the general loosening of moral standards?

If a pun on the name is not easy, the whole problem is ingeniously bypassed:

> Scalpem and Popoff
> Arrows and Shotup
> We Don't Care How You Bend Our Name
> (It's Actually Accles and Pollock)
> So Long as We Make and Manipulate
> Your Precision Steel Tubes.

And note the pun on *bend*.

Advertising to be effective must by its nature do at least three things: call attention to itself, keep that attention as long as possible by an effective memory aid, and appeal to as many people as possible. Advertising on the Continent relies mainly on the visual quality and by two methods within this, these not mutually exclusive, of course: design and repetition. A strong example of this is to be found in the Paris Métro, where in a gallery connecting two lines there is one poster contiguously repeated about a hundred times. In Basel, groups of three or four of the same poster are extremely common. In England, however, contiguous repetition is unknown.

English poster advertising is highly verbal. It would seem easier to remember a simple design than a group of words. Much of the text on English posters runs to ten or fifteen words. Yet the psycholinguist George Miller has pointed out that the "magic number 7 ± 2" is the measure of human memory storage capacity. Clearly, English verbal advertising is relying on the word play in its text to reinforce and facilitate attraction and memory.

Why is there such a basic difference between the Continental and the English approaches? Unless one is far superior to the other and the fact is a secret to advertisers and psychologists, the answer is in history. Although all language for special purposes uses some kind of special structure, most obviously poetry and law, the English tradition of special phonological form seems to go back farther than that on the Continent and to have been reinforced.

English alliteration goes back to the common Germanic *Stabreim*, and has never been completely lost. The Romance languages have not used it. German, which of course had it and still does in many old phrases, has never regained it, perhaps under the influence of the rest of the Continent. In English, alliteration remained very strong. Just one example: as late as and in as important a work as the King James Bible rime is studiously avoided and alliteration sought. In the Song of Songs, where the Hebrew says literally, "My sister, my bride", the King James translates "My sister, my spouse".

In England the visual-verbal tradition was also probably stimulated by the greater degree of literacy due to Protestantism and the weakening of feudalism earlier than on the Continent. The somewhat greater class mobility in England resulting therefrom could not but be reflected in attitudes toward types of speech from long before Mrs. Malaprop to after Pygmalion, the former classic examples, of course, being all unintentional puns.

About puns, Greenough and Kittredge say, "Finally, we may mention the universal Elizabethan habit of punning, which pervaded conversation and literature alike. Every kind of play on words was common, from the merest jingle in sound to the most elaborate calembour. Puns are now out of favor, probably because we think that the punster wishes us to laugh at them. We should be careful, however, not to take the punning habit of the Elizabethans so seriously. Clearly, the Elizabethans did not laugh at puns, unless they were particularly amusing."[1] Clearly, also, however,

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[1] J.M. Greenough and G.L. Kittredge, *Words and Their Ways in English Speech* (New York, Macmillan Co., 1961), p. 119.

punning has been so deeprooted in English verbal tradition that it is not just a matter of humor. If Greenough and Kittredge were writing now, they would have to point out that James Joyce has revived and strengthened the word play and especially the punning technique in writing beyond what it ever was in Elizabethan times.

My thesis is now that advertising is a strong historical heir of the English word play tradition, along with Cockney riming slang and Joycean contemporary literature. And to sum up, it is felt to be so successful because in poster advertising particularly it combines the visual and the verbal in a way that makes a lasting and easily remembered impression when by its nature a poster is seen for only a fleeting moment; and by its content word play combines the tradition that has appealed for centuries to all social levels of the English population. It may be that for the same reasons word play is so important in American advertising, the tradition having so to say slept beneath the surface to be awakened by the birth of advertising through the development of the mass media.

I have left for the end my favorite word play example. I saw it in the London Underground. It is based on minimal pairs:

> My First is in SENT But Not in SEND
> My Second's in BIND But Not in BEND
> My Third's in LAZE But Not in LATE
> My Fourth's in BEAT But Not in BAIT
> My Fifth's in RINK But Not in LINK
> My Whole is ?????, The Family DRINK

I cannot avoid the suspicion that some underpaid linguist may have been moonlighting.

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NAPHTALI LEWIS

A NOTE ON LITURGY

Alexandro Kerns, in multos annos felicesque

It was a long time before liturgy had anything to do with religion. Etymologically, *leitourgia* is compounded of an old word for 'public' (λήϊτον, which occurs in Herodotus 7.197) and the familiar word for 'work' — together, 'work for the people', or 'service for the state'.

When first encountered in Greek literature (Antiphon 5.77) *leitourgia* is a technical term in Greek polity, denoting any of several state services which wealthy citizens were required to perform in rotation at their own expense. The most important, most honorific and most onerous of these services were the *trierarchia*, the incumbents of which equipped and manned triremes of the fleet, and the *choregia*, the incumbents of which provided choruses for dramatic festivals.

But already in fifth-century literature, and increasingly thereafter, *leitourgia* is generalized to denote any service to or for the community. Once broadened in this way, the term easily encompassed cultic service. Its earliest occurrences in a religious context are found in section 56 of Demosthenes' *Against Meidias* (Or. 21), a speech delivered in or about 350 B.C., and in Aristotle's *Politics* 7(4).9.7 (1330 a 13), a work composed in the course of the next two decades or so. In the first of these passages Demosthenes characterizes each member of a dramatic chorus as doing public service to Dionysus, λῃτουργοῦντα τῷ θεῷ. In the second passage Aristotle, detailing the conditions of the optimal state, recommends that the land be divided into two parts, common and private, with half of the common land assigned to the service of the gods, εἰς τὰς πρὸς τοὺς θεοὺς λειτουργίας.

In postclassical Greek, while the secular sense of *leitourgia* predominate, that of religious service continued in use and was transmitted through the Septuagint into Christian usage. Contrary, however, to what one might expect on the basis of modern terminology, *leitourgia* denoting religious service penetrated only slowly into Christian usage. Thus, in the Septuagint *leitourgia* and related forms (verbal, adjectival, etc.) occur a total of 166 times; in 14 of those instances the sense is the general one of service or function, and in the other 152 occurrences the sense is

that of religious service, or service to God. In the New Testament, on the other hand, there are only 15 occurrences, 7 of them in the general sense and 8 referring to religious service.

One of the passages of the latter group is peculiarly appropriate to this occasion, as we celebrate with Alex Kerns, in the words of 2 Corinthians 9:12, ἡ διακονία τῆς λειτουργίας ταύτης.

LOUIS MARCK

METANALYSIS

The informal and pedagogic approach used in the oral presentation of this paper will be deliberately abandoned in what follows. Scholarly footnotes will also be avoided. The author neither discovered nor baptized the phenomenon in question. All he can claim for his own, by way of terminology, is its fourfold subdivision which he used in his doctoral dissertation on the topic. This dissertation will be listed as one of the 'references' given at the end of this presentation.

The term *metanalysis* was coined by Otto Jespersen for the analysis of words or word groups into new elements. This new analysis may arise either from misapprehension of the proper boundary or juncture between words (usually a functor and a contentive) or from failure to distinguish between the terminal sounds of a contentive stem and an affix (most frequently a plural suffix, in which case Jespersen speaks of *numerical metanalysis*). In all these cases, the operative factor is (mistaken) analogy. The end result is either lengthening or shortening of the original word.

Four main types of metanalysis may therefore be recognized:

1. Additive junctural metanalysis, e.g. *a nickname* instead of *an ekename* from 'anekename' on the analogy of 'aneedle': *a needle*.

2. Subtractive junctural metanalysis, e.g. *an adder* instead of *a nadder* from 'anadder' on the analogy of 'aneagle': *an eagle*.

3. Additive numerical metanalysis, e.g. *invoice, invoices* from *envoi, envois* on the analogy of *voice, voices*.

4. Subtractive numerical metanalysis, e.g. *pea, peas* from *pease, peases* on the analogy of *flea, fleas*.

Our linguistic terminology is, to put it mildly, presently in a state of flux. Thus, Hockett extends *metanalysis* to include all kinds of more or less folk-etymological 'reshapings' and Mario Pei's new *Glossary* is forced to take account of this extension. 'Metalinguists' such as Twaddell would like to appropriate the term for the analysis of their data. As a matter of fact, this writer's own dissertation was accordingly misclassified in the *Modern Language Journal*. Webster III still sticks to Jespersen's definition but unnecessarily introduces the "synonym" *affix-clipping* which, at best, seems applicable only to subtractive numerical metanalysis. The three-word terms

suggested here would seem to be perfectly unambiguous and no more cumbersome than say 'partial regressive assimilation'.

The examples introduced so far are all from English. While no language seems to be totally immune to these phenomena, they happen to be especially prevalent in English. Borrowed vocabulary is one of the reasons. But the high incidence of junctural metanalysis is more fundamentally due to the fact that, in Middle English and Elizabethan times, the language went through a period of great uncertainty as to word boundaries. Some linguists, such as Robert A. Hall, Jr., go so far as to liken the "junctural situation" of Elizabethan English to that now prevailing in the Romance languages, where, for instance, the two utterances *il est ouvert* and *il est tout vert* are phonetically identical. By contrast, modern English, according to Hockett and W. Nelson Francis, distinguishes between the utterances *an aim* and *a name* by the different placement of an open juncture which here happens to coincide with the traditional orthographic separation. In the process of acquisition, or perhaps re-acquisition, of speech habits of open juncture, some of these junctures were 'misplaced' (a term used in Pei's *Glossary* s.v. "metanalysis") with such well-known results as *nickname* and *adder*.

German is characterized by a much greater respect for word boundaries. In the North, prevocalic open junctures are accompanied, or indeed 'realized', by the use of a glottal stop. It should not come as a surprise, therefore, that such instances of junctural metanalysis as *Nahle* for *Ahle*, *Nassel* for *Assel*, *Nast* for *Ast* and *Ache* for *Nachen*, *Essel* for *Nessel*, *Est* for *Nest* are substandard and 'Southern'.

Metanalysis is rampant in the creolized languages based on French (*zozo* 'bird', *bitation* 'dwelling'). Sigmund Feist has advanced the view that Germanic is creolized Indo-European. According to Adolf Noreen, the prothetic consonants of some Indo-European roots in Germanic may be the metanalytic remnants of prefixes. To use Latin as a simplistic shortcut notation, *nehmen* might be etymologized as *in-emere* and *sleep* as *ex-labi*. Quite speculatively, metanalysis may one day become a heuristic factor in external reconstruction even beyond Indo-Hittite.

Let us return to the more limited field of the genesis of our English vocabulary. Weekley treats metanalysis under the heading of "phonetic accidents", Hockett calls it a "minor mechanism of phylogenetic change". These terms are of course subject to interpretation. But in the light of the very few standard examples usually found in books on language, the impression might arise that we are dealing with just a handful of 'flukes'. To counteract this impression and to urge that, in the teaching of linguistics and etymology, metanalysis be given a status comparable to that of assimilation, dissimilation, etc., let us therefore conclude with a list of those main entries in Webster III which, by virtue of the somewhat cumbersome etymological notation used therein, are instances of metanalysis. Some of these have obviously been metanalyzed outside of English, others are quite recondite, others again dialectal (often Scottish). All of them, however, are main entries in the deliberately circumscribed inventory represented by Webster III. The special category of "articled nouns"

(Partridge) from Arabic is intentionally omitted. Since the full etymology is given by Webster III, we shall dispense with it altogether, even at the risk of bemusing the reader with some items that happen to be homonymous with unrelated non-metanalyzed words. For those who care, this should only increase the fascination of etymological revelation.

1. Additive junctural metanalysis (40 items): accomplice, alarm, alert, aligreek, alligator, ammunition, daffodil, decoy, denim, lacrosse, lagniappe, lamantin, lammer, lariat, lavolta, legua(a)n, lierre, lisle, loriot, nain(sel), namby-pamby, naunt, neddy, newt, nickname, nidget, nimshi, ningle, ninny, nombril, nonce, nope, notch, nother, nown, nuncle, omelet, tawdry, tone, tother.

2. Subtractive junctural metanalysis (40 items): adder, aitchbone, apron, atomy, auger, aught, auncel, azure, binnacle, bodega, cate, dobe, emony, est, ettle, eyas, guglia, haberdine, humble pie, ingot, lone, marasca, maraschino, merry, morello, muck, orange, ouch, ounce, peal, penthouse, possum, potecary, prentice, puzzle, Riding, rouse, umpire, vamp, van(guard).

3. Additive numerical metanalysis (20 items): atomy, baize, bodice, breech, carfax, celery, chess, chintz, earnest, grece, invoice, jess, lettuce, pox, quince, salami, trace, trousers, truce, tweeze.

4. Subtractive numerical metanalysis (27 items): alms, asset, bridle, burial, caper, caterpillar, cherry, chick, Chinee, clow, coppy, corp, eave, gentry, marquee, merry, mistletoe, pea, Portugee, riddle, row, sash, shay, sherry, shimmy, skate, stave.

<div align="right">POLYTECHNIC INSTITUTE OF BROOKLYN</div>

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PETER H. SALUS

HARVEST, FALL AND AUTUMN

The name of the season of fruition and reaping in Old English was *haerfest*.[1] In contemporary American English the season is called *fall*, in British English, *autumn*. The *OED* labels *fall* an Americanism and seems to consider *autumn* the 'proper' word. It does, however, admit that *fall* is used of the season in dialect and in provincial speech. It is worthy of note in connexion with this that Wright's dialect dictionary lists occurrences of *fall* from twenty-one English and Scottish counties, from all sections of the United Kingdom;[2] *fall*, thus, cannot be pinned down to any dialect area. Research has shown, moreover, that the *OED* is not excessively accurate in its citation and attestation of any of these words; nor is the Chicago *Dictionary of Americanisms* as thorough-going as one might hope. For example, the *OED* gives Chaucer's *Boethius* IV.vii.144 as the earliest use of *autumn*. In actuality, the word not only appears nowhere in IV.vii, but does occur in four other places in the *Boece*: I.ii, I.v, I.vi, and IV.vi.[3] S.v. *harvest*, the *OED* omits the usages of the *Peterborough Chronicle* for 1131[4] and that of the Middle English *Bestiary* in BM ms. Arundel 292, f.5ᵛ.[5] The aim of this paper is to illustrate the distribution of *harvest, fall* and *autumn* in the development of the English language.

The earliest use of *haerfest* is in the *Denewulf Charter* of 902;[6] but Byrhtferth's

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[1]   The writer wishes to express his thanks to Mr. Robert B. Woodings of the School of English Studies, University of East Anglia, for bringing this problem to his attention; and to both Mr. Woodings and Professor Charles R. Dahlberg, Department of English, Queens College, for aiding and encouraging him in this work.

[2]   J. Wright, *The English Dialect Dictionary* II (Oxford, 1900), 287ᵇ, lists Kircudbright, Ayrshire, Dumfries, Galloway, Northhumberland, the West Riding of Yorkshire, Cheshire, Staffordshire, Lincolnshire, Northamptonshire, Warwickshire, Shropshire, Gloucestershire, Oxfordshire, Berkshire, Surrey, Sussex, Hampshire, Dorset, Devonshire, and the Isle of Wight.

[3]   Ed. F.N. Robinson, I. metrum ii, 11. 24-26 (p. 322ᵃ); I. metrum v, 11. 20-26 (p. 326ᵇ); I. metrum vi, 11. 11-18 (p. 328ᵃ); IV. metrum vi, 11. 32f. (p. 371ᵇ).

[4]   Ms. Bodl. Laud. Misc. 636, f. 88ʳ: "And se kyng Henri com ham to Engleland toforen heruest aefter Sancte Petres messe þe firrer" (i.e. after feast of SS. Peter and Paul: 29 June).

[5]   Ms. BM Arundel 292, f. 5ᵛ: "Natura Formice". "In ðe heruest hardilike gangeð/And renneð rapelike, and resteð hire [mire: ant] seldum,/And fecheð hire fode ðer ge it mai finden."

[6]   In *Codex diplomaticus aevi Saxonici*, ed. John M. Kemble, V (1844), 15: "To haerfestes emnihte sic simne aȝyfed."

Handboc (ca. 1050) lists all the seasons for us: "pa feower timan ... lengten sumor, haerfest, & winter."[7] As a season-name, *haerfest* also occurs in the *Peterborough Chronicle*, the *Ancrene Riwle* (1225),[8] the *South English Legendary* (1290),[9] the late thirteenth-century *Bestiary*, Wyclif's translation of *Jude* 12 (1382),[10] the prose version of the *Secreta Secretorum* (1422),[11] the *Catholicon Anglicum* of 1483,[12] Wynkyn de Worde's *Ortus Vocabulorum* (1500),[13] and in Recorde (1551). But by the sixteenth century its use is on the wane, for the Romance word, *autumn*, is creeping in. The earliest use is Chaucer's (ca. 1374); Tindale uses it in his translation of the *Jude* passage in 1526.[14] And at this time yet another name for the third season of the year begins to gain some currency: in 1545, Roger Ascham tells us that "The hole yere is devided into iiii. partes, Spring tyme, Somer, faule of the leafe and winter."[15] And now a three-way race takes-place; for each of these, *harvest, autumn, fall*, took hold of a portion of the English-speaking world. In 1552, Richard Huloet defined *Autumnus* as *harveit* (= *harvest*);[16] Shakespeare used *autumne* in *Taming of the Shrew*:

> Though she chide as loud
> As thunder, when the clouds in Autumne cracke.[17]

and Sir Walter Raleigh punned on *fall* in his *Nymph's Reply*:

> A honey tongue, a heart of gall
> Is fancies spring, but sorrows fall.[18]

The seventeenth century continued the use of all three season names: in 1626, Cockeram's *English Dictionarie* defines *Autumne* as *harvest*;[19] in 1643, Roger Williams called the season "fall of leafe and Autumne";[20] in 1646, Thomas Browne uses *harvest*;[21] the 1649 *Perfect Description of Virginia* states that "Our Autumn or fall of leafe is in November";[22] and in 1653 Izaak Walton uses *Automne*.[23] Superficially, it might seem that *fall of leaf* was an Americanism, or at least a provincialism, but

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7 *Anglia* VII (1885), 299:
8 L. 412: "pe holi rode dei, pe latere pet is in heruest".
9 I, 12/393: "Aftur hervest he comeʒ i-lome".
10 "Heruest trees withouten fruyt" (= King James: "trees whose fruit withereth, without fruit").
11 *Three Prose Versions of the Secreta Secretorum*, EETS ES 74 (1898), 243: "Al the old Phylosofers the yere dyvyseden in fowre Parties, wyche ben callid Veere, Somer, Herrust, and Wyntyr."
12 EETS OS 75 (1881), s.v. *Harvest*.
13 Bodleian Junius 52, s.v. *Autumpnus*.
14 "Trees rotten in Authum."
15 *Toxophilus, the Schole of Shootinge* I (ed. Arber, 1868), 48.
16 *Abecedarium Anglo-Latinum pro Tyrunculis*, s.v. *ffoure seasons or times of the yeare*.
17 I. ii. 96.
18 Ll. 11f.
19 H[enry] C [ockeram], *The English Dictionarie: or, An Interpreting of Hard English Words*[2].
20 *Key*, 93; in: *Rhode Island Historical Society Collections* I (1827).
21 *Pseudoxia epidemica, or enquiries into very many received tenents* VI.iii.287.
22 P. 15; in: P. Force, comp., *Tracts and Other Papers Relating to the Colonies* II, 8 (1836-38).
23 *Compleat Angler*, 204: "In Automne, when the leaves begin to rot..."

then we see that Evelyn's *Sylva* talks of "leaves ... becoming yellow at the fall",[24] and that Captain J. Smith in *England's Improvement Reviv'd* (1670) says that "The best time to ... remove younger trees is at the fall."[25] But from the midst of the seventeenth century, the use of *harvest* for the season, as opposed to the time of the taking of crops, waned (this change is typified by *Paradise Lost* XI.899: "Seed time and Harvest, Heat and hoary Frost," and by Dryden's translation of Virgil's *Georgics* IV.337: "Two Honey-Harvests fall in ev'ry Year"). The last time *harvest* is used as one of the four seasons seems to be in Mackenzie's *Treatise on Marine Surveying* in 1774.[26] But until the third quarter of the eighteenth century, *fall* and *autumn* were both current in England and in America. A glance at the dictionaries is of great interest here. Blount in his *Glossographia* (1674), s.v. *Autumnal* gives us "belonging to harvest or Autumn ...";[27] but Phillips in *The New World of Words* (1706), s.v. *Season* lists "Spring, Summer, Autumn and Winter", with no entry for either *fall* or *harvest*;[28] Kersey in 1715[29] and Bailey in 1730[30] list only *autumn*. Dr. Johnson, in 1755, gives us both *fall* and *autumn*, and cross-references them, defining *fall* as "Autumn; the fall of the leaf; the time when leaves drop from the trees", and cites a couplet from Dryden's *Juvenal*, under *autumn* his earliest citation is the above-mentioned *Taming of the Shrew* passage;[31] Johnson's successor, John Newbery, lists both *autumn* and *fall* in 1763.[32] But soon after this lexicographers seem to have begun viewing *fall* as an Americanism: in 1816 John Pickering listed *fall* as a gloss on *autumn* in his *Collection of Words and Phrases ... Peculiar to the United States of America* and, despite the fact that Webster listed both *fall* and *autumn* in 1828, Halliwell included *fall* in his *Dictionary of Archaic and Provincial Words* in 1850.[33]

Thus by the end of the nineteenth century everyone was convinced as to the American origin of *fall*. The Fowlers, in 1906, wrote that "*Fall* is better on the merits than *autumn* in every way",[34] and the *New Statesman* in 1927 expanded this to "American ... *fall* is an infinitely better word than *autumn*."[35] Luckily, though, despite the fact that the *Saturday Review* had decided in 1925 that *fall* was American and *autumn* English,[36] H.L. Mencken was able to note in 1936 that *fall*, "while archaic in England,

[24]   *Sylva, or a discourse of forest trees* (ed. 1679), 15.
[25]   III (1673), 59.
[26]   P. 78: "At the end of Harvest, when/the Days are running short..."
[27]   T. B[lount], *Glossographia: or, a Dictionary Interpreting the Hard Words of Whatsoever Language, now used in our refined English Tongue...*
[28]   E. Phillips, *The New World of Words*[6], rev. by J[ohn] K[ersey].
[29]   John Kersey, *Dictionarium Anglo-Britannicum: Or, A General English Dictionary*[2], s.v. *Autumn*.
[30]   *Dictionarium Brittanicum: Or a more Compleat Universal Etymological English Dictionary...*
[31]   S. Johnson, *A Dictionary of the English Language*. The Dryden citation reads: "What crowds of patients the town doctor kills,/Or how last *fall* he rais'd the weekly bills."
[32]   *An Universal Dictionary of the English Language.*
[33]   James O. Halliwell, *A Dictionary of Archaic and Provincial Words*[2], s.v. *fall*, §4.
[34]   *The King's English.*
[35]   25 June 1927.
[36]   Ernest Boyd, "Translations", *Saturday Review of Literature*, 26 December 1925, p. 442.

[is] by no means wholly extinct",[37] which he further qualified in 1945 to a flat statement that *fall* is considered American merely because it is "in wider use in this country than in England".[38] And despite his non-professional status, my inquiries have shown that Mencken is more correct in his appraisal of the situation than either the *OED* or the *Dictionary of Americanisms on Historical Principles*.

Finally, it may be of comic interest to point out the sources of lexicographers' creations. As previously mentioned, Dr. Johnson wrote that *fall* was "Autumn; the fall of the leaf; the time when leaves drop from the trees". Eight years later, Newbery glossed *fall* as "Autumn; the fall of the leaf". Sixty-five years after Newbery, Noah Webster defined *fall* as "the fall of the leaf; the season when leaves *fall* from the trees; autumn ..." In 1850, Halliwell repeated Webster almost verbatim. In 1936, the fifth edition of *Webster's Collegiate Dictionary* offered its readers "The season when leaves fall from the trees; autumn"; and, finally, in 1955 (exactly two centuries after the first edition of Johnson's masterpiece), the *American College Dictionary* broke with tradition and unoriginality sufficiently to give its readers "*Chiefly U.S.* autumn". As I have found only three non-lexical uses of *fall of the leaf* since 1675,[39] it is certainly about time to drop this locution from our supposedly descriptive glossaries.

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[37] *The American Language*[4], p. 62. Cp. p. 100.

[38] *The American Language, Supplement I*, p. 89.

[39] 1675: *Calendar of Virginia State Papers...* I, 8 (1875): "Which said laind your petitioner proposed this last fall of the leaf to have seated"; 1740: W. Stephens, *Journal of the Proceedings of Georgia* II, 17 in: A.D. Chandler, ed., *The Colonial Records of the State of Georgia* (1904ff.): "This Fall of the Leaf produced a sickly Season with us in various Kinds"; P.M. Freneau, *Miscellaneous Works* (1788), 424: "He was... so eager for money; — I say it with grief,/He hardly consider'd the fall of the leaf."

PHILIP SCHERER

TENSE MODIFICATION IN GOTHIC

0. When one reviews the available information on the uses of the Gothic tense system, one encounters brief references to its use in distinguishing past from non-past (present-future) but none to its possible function in the area of relative or modified tense.[1]

Even the writer's own study on the Gothic preverb *ga-*, which represents the only attempt at this kind of correlation, now appears to him insufficiently explicit and in need of revision. Hence, the following contribution.[2]

1.1. Gothic *ga-* served to restrict the use of the verb in one of two ways: denotationally, if the verb was of class 'A', temporally, if it was of class 'B'; it did not restrict the use of verbs of class 'C'.[3] The following examples illustrate these varieties of use and non-use:

Denotational restriction. *qiman* 'come' vs. *gaqiman* 'become to: be fitting': *jah atiddja dalaþ rign jah qemun aƕos* 'And the rain fell, and the floods came' (M 7.25) vs. *jus qinons, ufhausjaiþ wairam izwaraim, swe gaqimiþ in fraujin* 'Wives, be subject to your husbands, as *is fitting* in the Lord' (C 3.18).

Temporal restriction. *meljan* 'write' vs. *gameljan* 'write': *nim þus bokos jah melei ahtautehund* 'Take your bill and write eighty' (L 16.7) vs. *nim þus bokos jah gasitands gamelei fimf tiguns* 'Take your bill and sit down ... *write fifty*' (L 16.6).

Zero restriction. *briggan* 'bring': *ni briggais uns in fraistubnjai* ... 'Lead us not into temptation' (M 6.13) vs. *habands winþis kauron ... jah briggiþ kaurn in bansta seinamma* 'Having winnowing forks ... to ... gather wheat into his granary' (L 3.17).

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[1] Thus, to cite Streitberg (Wilhelm Streitberg, *Gotisches Elementarbuch*[2]), "(1) Die gegenwärtige Handlung: Sie wird durch das Präsens gegeben (§ 299); (2) Die zukünftige Handlung. Wie in allen germanischen Sprachen genügt auch im Gotischen das Präsens zur Bezeichnung der zukünftigen Handlung (§ 300); (3) Die vergangene Handlung. (a) Die vergangene aktive Handlung wird durch das Präteritum ausgedrückt. (b) Die vergangene passive Handlung muss durch Umschreibung gegeben werden (§ 303)" At no point does this view of the tense function of the Gothic verb, even in its elaboration of the interplay between tense and putative aspect (cf. author's "Aspect in Gothic", *Lg.* XXX [1954], 211-223), suggest the possibility of further tense differentiation.

[2] "The Theory of the Function of the Gothic Preverb *ga-*," *Word* 20.222-45.

[3] *Ibid.*: § 4 on class 'A'; §§ 5 - 6 on class 'B'; § 7 on class 'C'.

In the first set, *ga-* indicates denotational shift in the situational context of 'be subject to your husbands, as → (becomes (you): is fitting) in the Lord; in the second, temporal shift in the syntactic context of the preceding participial *gasitands*, 'when you have sat down, → (then) write'; in the third, there is no shift in the use of 'bring' regardless of context.

2.0. We shall concern ourselves here only with *ga-* in its function of temporal restriction or tense modification in its application to combinate verbs, since these alone may be *ga-* marked; isolate verbs will be considered *ga-* non-marked.[4]

2.1. Two verbal events are either explicitly differentiated in their temporal interrelation and the representative combinate forms *ga-* marked, or they are not explicitly differentiated and their representative combined *ga-* unmarked. There results a tetrad of possibilities: (a) Both events are differentiated; (b) Neither is; (c or d) One or the other is differentiated (cf. Examples below).[5]

2.2. There are three types of temporal differentiation or tense modification in Gothic (above): the modification of anteriority (§ 3); the modification of subsequence (§ 4); and the modification of currence (§ 5).[6] Each of these will now be illustrated, the marked sub-type preceding the unmarked one.

3.0. *Modification of anteriority.* — Each variety, the marked and the unmarked, may occur in either M(ain) or S(ubordinate) C(lause); and in either of these the combinate

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[4] The above classification of the Gothic verb may be schematically represented: thus, the formulae 1 to 6:

1. V → $\begin{Bmatrix} \text{V-is} \\ \text{V-co} \end{Bmatrix}$ A given Gothic verb is syntactically an isolate (V-is) or a combinate (V-co).

2. V-is → V   An isolate verb does not generate *ga-*: it is *ga-* non-marked.

3. V-co → $\begin{Bmatrix} \text{(ga-)} \begin{Bmatrix} \text{VA} \\ \text{VB} \end{Bmatrix} \\ \text{VC} \end{Bmatrix}$ A combinate verb — and only a combinate verb — may generate *ga-*, if it is of class 'A' or of class 'B'; none, if it is of class 'C': class 'C' verbs are *ga-* non-marked.

4. (ga-) VA → $\begin{Bmatrix} ga\text{- VAD} \\ \varnothing\text{-VA} \end{Bmatrix}$ The optional *ga-* is realized and the VA denotationally marked; or it is not realized and the VA verb denotationally unmarked.

5. (ga-) VB → $\begin{Bmatrix} ga\text{- VBT} \\ \varnothing\text{- VB} \end{Bmatrix}$ The optional *ga-* is realized and the VB temporally marked; or it is not realized and the VB verb temporally unmarked.

6. *ga-* VBT → *ga-* $\begin{Bmatrix} \text{VB-ant} \\ \text{VB-sub} \\ \text{VB-cur} \end{Bmatrix}$ The temporally marked VB may be differentiated for the modification of anteriority, subsequence or currence.

[5] Illustrations of bidirectional tense modification may be found in sections, §§ 3 and 4: thus, for instance, § 3.2, J 6.24 (double modification); § 3.2, J 8.38 (double non-modification); § 4.1, J 11.32 (anteriority); § 4.2, L 5.19 (subsequence).

[6] On the terminology of temporal modification, cf. W. F. Twaddell, *The English Verb Auxiliaries*[2] (Brown University Press, 1965), whose terms, anteriority, subsequence, currence have been adopted here; the first two replace the author's previously used terms, regressive and progressive differentiation (*Word*, *ibid.*, § 5.2). On the problem of the interrelations between time and tense, cf. William E. Bull, *Time, Tense and the Verb* (Berkeley and Los Angeles, University of California Press, 1963); especially, pages 11 to 19, whose bidirectional axis of orientation seems to lend support to the assumption of bidirectional tense modification of this study.

T(ense) F(orm) is to be considered temporally prior to the TF of its syntactic correlate. We shall first illustrate the TF in the MC, then the TF in the SC, citing wherever possible, both the marked and the unmarked occurrences: (a)M and (b)UM.

(1) TF of MC in anteriority to that of

PURPOSE CLAUSE: (a)M: ... *gawaurhta twalif ei insandidedi ins* '... he appointed twelve ... to be sent out' (Mk 3.14);

(b)UM: *saih ei mann ni qiþais* 'see that you say nothing to anyone' (M 8.4).

RESULT CLAUSE: (a)M: *gamatidedun jah sadai waurþun* 'And they ate, and were satisfied' (Mk 8.8);

(b)UM: ... *matidedun jah sadai waurþun allai* '... all ate and were satisfied' (L 9.17).

INTERROGATIVE CLAUSE: (a)M: *gabandwidedun þan attan is þata haiwa wildedi haitan ina* 'They made signs to his father, inquiring what he would have him called' (L 1.62);

(b)UM: ... *sokidedun* haiwa ... *galagidedeina* (ina) *in andwairþja is* '... they sought ... to lay him before Jesus' (L 5.18);

(2) TF of SC in anteriority to that of governing clause, the SC being a(n)

TEMPORAL CLAUSE: (a)M: *þan gasah managei..., gastigun in skip* 'when the people saw ... they ... got into the boat' (J 6.24);

(b)UM: *swe hausida ..., salida ...* 'when he heard ..., he stayed ...' (J 11.6).

PARTICIPIAL CLAUSE: (a)M: *galukands hairdein þein ..., bidei du ...* '... shut the door and pray to ...' (M 6.6);

(b)UM: ... *is sokjands spilda [nam] ga[h] melida* 'And he asked for a writing tablet, and wrote' (L 1.63).

PROTASIS: (a)M ... *jabai gaswiltiþ wair, frijons ist witodis* '... if her husband dies she is free from that law' (R 7.3);

(b)UM: ... *jabai augo þein taihswo marzjai þuk, usstagg ita ...* 'If your right eye causes you to sin, pluck it out ...' (M 5.29).

RELATIVE OBJECT CLAUSE: (a)M: *ik þatei gasah at attin meinamma rodja* 'I speak of what I have seen with my Father' (J 8.38);

(b)UM: *jah jus þatei hausideduþ fram attin izwaramma taujiþ* 'and you do what you have heard from your father' (J 8.38).

RELATIVE PARTICIPIAL CLAUSE: (a)M: *hazuh nu sa gahausjands at attin ... gaggiþ du mis* 'Everyone who has heard ... from the Father comes to me' (J 6.45);

(b)UM: *hazuh sa ... hausjands waurda meina ..., ataugja izwis hamma galeiks ist* 'Everyone who ... hears my words ..., I will show you what he is like' (L 6.47).

ADVERBIAL RELATIVE CLAUSE: (a)M: *þisharuh ei ina gafahiþ, gawairpiþ ina ...* 'wherever it seizes him, it dashes him down ...' (Mk 9.18).

4.0. *Modification of subsequence.* — The combinate TF is considered temporally subsequent to the TF of its syntactic correlate (cf. § 3.0).

(1) TF of MC in subsequence to that of

MC: (a)M: *leitil nauh jah ni saihiþ mik, jah aftra leitil jah gasaihiþ mik* 'A little

while, and you will see me no more, and again a little while, and you will see me' (J 16.16);

(b)UM: *nimiþ ina jus jah bi witoda izwaramma stojiþ ina* 'Take him yourselves and judge him by your own law' (J 18.31).

PROTASIS: *jabai ... atteka wastjai is, ganisa* 'If I only touch his garment, I shall be made well' (M 9.21);

(b)UM: *iþ barna Abrahamis weseiþ, waurstwa Abrahamis tawidedeiþ* 'If you were Abraham's children, you would do what Abraham did' (J 8.39).

TEMPORAL CLAUSE: (a)M: *þan gasah managei ..., gastigun in skipa* 'when the people saw ..., they themselves got into the boats' (J 6.24);

(b)UM: *... biþe warþ sundro, frehun ina ... gajukons* '... when he was alone, those ... asked him concerning the parables' (Mk 4.10).

TEMPORAL PARTICIPIAL CLAUSE: (a)M: *ik qimands gahailja ina* 'I will come and heal him' (M 8.7);

(b)UM: *... Marja ... gasaihandei ina draus imma du fotum* '... Mary ... when she saw him, fell at his feet' (J 11.32).

RELATIVE SUBJECT CLAUSE: (a)M: *... saei fraqisteiþ saiwalai seinai in meina, ganasjiþ þo* '... whoever loses his life for my sake, he will save it' (L 9.24);

(b)UM: *... saei fiaiþ saiwala seina ... bairgiþ izai* '... he who hates his life ... he will keep it (J 12.25).

RELATIVE OBJECT CLAUSE: (a)M: *gaarma þanei arma ...* 'I will have mercy on whom I have mercy ...' (R 9.15);

(b)UM: *þatei taujis, tawei sprauto* 'What you are going to do, do quickly' (J 13.27).

(2) TF of SC in subsequence to that of governing clause, the SC being a(n)

PURPOSE CLAUSE: (a)M: *inuhsandidedun andbahtans ... ei gafaifaheina ina* 'they sent officers to arrest him' (J 7.32);

(b)UM: *... nemun stainans, ei waurpeina ana ina* '... they took up stones to throw at him' (J 10.31).

RELATIVE ADNOMINAL CLAUSE: (a)M: *ik insandja aggilu meina ... saei gamanweiþ wig þeinana* 'I send my messenger ... who shall prepare thy way before thee' (M 11.10);

(b)UM: *sind sumai ... þaiei ni kausjand dauþau* 'there are ... who will not taste death' (L 9.27).

INDIRECT INTERROGATIVE CLAUSE: (a)M: *... sokidedun haiwa ina ... galagidedeina in andwairþja is* '... they sought to ... lay him before Jesus' (L 5.18);

(b)UM: *... witaidedun imma hailidediu sabbato daga* '... they watched him, to see whether he would heal him on the sabbath' (Mk 3.2).

5.0. *Modification of currence.* — It is always marked and found in indirect and direct (rare in the Corpus) discourse, but only with the non-past of 'B' verbs; the past of these verbs is marked for anteriority.

· 5.1. INDIRECT DISCOURSE. — Anteriority: *gateihats Iohannen þatei gasehuts jah gahausideduts* 'tell John what you have seen and heard' (L 7.22).

Currence: *gateihats Iohannen ... þatei ... þrutsfillai gahrainjand, baudai gahaus-jand ...* 'Tell John that ... lepers are cleansed, and the deaf hear ...' (L 7.22); cf.: also M 11.4.

5.2. DIRECT DISCOURSE. — Currence: *... Iesus ... qaþ du im: þata izwis gamarzeiþ?* '... Jesus ... said to them, "Do you take offense at this?"' (J 6.61).

6. *Recapitulation.* — The foregoing three sections assume that:

(a) temporal differentiation into the modifications of anteriority, subsequence and currence is syntactically inherent in the interrelations of a complex sentence;

(b) the Gothic *ga-* forms, which occur only as combinates, may be considered its specific though redundant formal markers;

(c) zero forms, which alone occur as isolates, may when occurring as combinates along with *ga-* forms be considered as functionless in the marking of syntactically inherent temporal differentiation.

7. — 8. We shall now apply the schema of tense modification to an examination of the participles (§ 7) and of the infinitive (§ 8).

7.0. Either of the participles, past or present, may function as (1) a nominal or (2) a non-finite constituent of a finite tense form. In the first of these functions, the participle is considered to be a transform of an underlying SC whose TF is in some relation of temporal modification to the TF of the governing clause; in the second, the participle functions along with its finite form.

A. THE PAST PARTICIPLE.

(1) *A nominal.* — It is a transform of a relative clause in situations of anteriority: (a)M: *fram aiwa ni gahausiþ was þatei uslukiþ ƕas augona blindamma gabauranamma* (=*þamma saei blinds gabaurans warþ*) 'Never since the world began has it been heard that any one opened the eyes of a man born blind' (J 9.32);

(b)UM: *gaggiþ ... in fon ... þata manwido* (=*þata manwiþ ist*) *unhulþin ...* 'Depart ... into the ... fire prepared for the devil ...' (M 25.41).

(2) *A non-finite constituent.* — It is found with TF in each of the modifications and usually marked, except when TF occurs in relative clause in a situation of anteriority, when it is either marked or unmarked.

ANTERIORITY. (a)M: *... gamotida imma wair sums ... saei wastjom ni gawasiþs was* 'there met him a man ... who ... had worn no clothes' (L 8.27);

(b)UM: *... þaiei hnasqjaim wasidai sind, in gardim þiudane sind* 'those who wear soft raiment are in kings' houses' (M 11.8).

(a)M: *in frawaurhtim du gabaurans warst jah du laisis unsis* ' "You were born in utter sin, and would you teach us" ' (J 9.34).

SUBSEQUENCE. (a)M: *ƕas frawaurhta ... ei blinds gabaurans warþ* 'who sinned ... that he was born blind?' (J 9.2).

(a)M: *... andbahtos meinai usdaudeina, ei ni galewiþs wesjau Iudaium* 'my servants would fight, that I might not be handed over to the Jews' (J 18.36).

CURRENCE. (a)M: *gasaiƕands Iudas ... þatei du stauai gatauhans warþ* 'When Judas ... saw that he was condemned' (M 27.3).

B. THE PRESENT PARTICIPLE.

(1) *A nominal.* — It is a transform of a temporal clause or of a relative clause when in anteriority, only of a relative clause in subsequence.

ANTERIORITY. (a)M: *... Marþa, sunsei qam þarei was Iesus, gasaiƕandei ina* (= *þan ina gasaƕ*) *draus imma du fotum ...* '... Mary, when she came where Jesus was and saw him, fell to his feet' (J 11.32);

(b)UM: *þuk taujandan armaion* (= *þan þu taujis armaion*) *ni witi hleidumei þeina* '... when you give alms do not let your left hand ...' (M 6.3).

(a)M: *ƕazuh nu sa gahausjands* (= *saei gahaudisa*) *at attin jah ganam gaggiþ du mis* 'Everyone who has heard and learned from the Father comes to me' (J 6.45);

(b)UM: *saei habai ausona hausjandona* (= *þaiei hausjand*), *gahausjai* 'He who has ears to hear, let him hear' (Mk 4.9).

SUBSEQUENCE. (a)M: *wissuh þan Iudas sa galewjands ina* (= *saei ina galeweiþ*) *þana stad* 'Now Judas, who betrayed him (= *was to betray*) him, also knew the place' (J 18.2);

(b)UM: *stoþuh jah Iudas sa lewjands ina* (= *saei ina leweiþ*) *miþ im* 'Judas, who betrayed (= *was betraying*) him, was standing with them' (J 18.5).

(2) *A non-finite constituent.* — It is always unmarked. *galaiþ jah afþwoh jah qam saiƕands* 'he went and washed and came back seeing' (J 9.7).

8.0. The infinitive functions along with the finite TF in marked and unmarked anteriority and in marked and unmarked subsequence.

ANTERIORITY. (a)M: *sokidedun þan ina gafahan, jah ainshun ni uslagida ana ina handu* 'So they sought to arrest him; but no one laid hands on him' (J 7.30);

(b)UM: *sumaih þan ize wildedun fahan ins; akei ni ainshun uslagida ana ina handuns* 'Some of them wanted to arrest him, but no one laid hands on him' (J 7.44).

(a)M: *saei wili saiwala seina ganasjan, fraqisteiþ izai* 'Whoever would save his life will lose it' (Mk 8.35);

(b)UM: *saei ... wili saiwala seina nasjan, fraqisteiþ izai* 'For whoever would save his life will lose it' (L 9.24).

SUBSEQUENCE. (a)M: *... jabai Satana usstoþ ana sis silban jah gadailiþs warþ, ni mag gastandan* '... if Satan has risen up against himself and is divided, he cannot stand ...' (Mk 3.26);

(b)UM: ... *jabai gards wiþra sik gadailjada, ni mag standan sa gards jains* '... if a house is divided agaist itself, that house will not be able to stand' (Mk 3.25).

(a)M: ... *uslaubei mis frumist galeiþan jah gafilhan* (= *ei* gafilhau) *attan meinana* '... let me first go and bury my father' (M 8.21);

(b)UM: *laista afar mis jah let dauþans filhan seinans dauþans* 'Follow me, and leave the dead to bury their dead' (M 8.22).[7]

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[7] *Filhan* 'bury' rather than the amended $<$ *ga-* $>$ *filhan* (perfective, according to Streitberg): the unmarked *filhan* within the syntactic correlation of coordination, the marked *gafilhan* in a syntactic situation of clear subsequence (the infinitive, a transform of a purpose clause).

BENJAMIN SCHWARTZ

LARYNGEALS: A BRIEF SKETCH
OF THE CURRENT STATUS OF THE THEORY[1]

1. SIGNS

a. *General*

X = any laryngeal
H = any voiceless laryngeal
Z = any voiced laryngeal
E = *e-* coloring laryngeal
A = *a-* coloring laryngeal
Ω = *o-* coloring laryngeal
X^{w2} = laryngeal with labial appendage
$Ḫ^2$ = laryngeal retained in Hittite

b. *Specific*[3]

	Lehmann et al	Kuryłowicz	Sapir-Sturtevant
(1)	ʔ	$ʔ^1$	ɔ
	e- coloring, not continued in Hittite		
(2)	x	$ʔ^2$	x
	a- coloring, *h, -h(h)-* in Hittite.		
(3)	γ	$ʔ^3$	γ
	e- coloring, *h-, -h-* in Hittite.		
(4)	h	$ʔ^4$	ɔ̦
	a- coloring, not continued in Hittite.		

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[1] This paper could well be another in the Kerns-Schwartz series, since it has already benefited from the scrutiny and actual contributions of Kerns. But while Kerns does not seek to dissociate himself from our previous efforts in this area, he professes a growing skepticism about the theory. Like Cowgill and some others, he claims that at least some of the phonological phenomena can be explained on other than laryngeal grounds, and that he prefers now to await surer and more abundant evidence than has been thus far adduced.

[2] These symbols occur in the literature, but are not used in this paper.

[3] For a more extended comparative table cf. e.g., Kerns-Schwartz, *The laryngeal hypothesis and IH, IE vocalism*, JOAS 60. 182 (1940).

2. SELECTED BIBLIOGRAPHY:

Sturtevant, *Indo-Hittite Laryngeals* (IHL) 1942. Theory rejected by Bonfante in his
   review in *Classical Philology* 39.51-57 (1944).

Lehmann, *Proto-Indo-European Phonology* (PIEP) (Austin, Texas, 1952).

Winter, editor, *Evidence for Laryngeals* (1960)

Counterargument in Kronasser, *Vergleichende Laut- und Formenlehre des Hethitischen*
   (1956), pp. 75-96.

   All above with extensive bibliographies.

3. The laryngeal theory seeks to reconstruct PIE phonology partly on the basis of
IE proper phonology (e.g., Saussure's *Mémoire* in 1879 on the consonantal quality
of *ə*, apparently corroborated by the occurrence of a Hittite phoneme *h* not otherwise
paralleled in IE proper)[4] and by closer study of other, perhaps residual phonological
phenomena in the continuant languages. Two schools of thought, not necessarily
mutually exclusive, treat the problem as phonemic-allophonic or as algebraic.
Neither school has thus far achieved a thoroughgoing integration of presumed laryn-
geal components into the entire structure of PIE and IE. Both PIE vocalism (espe-
cially as regards *ĕ* and *ă* in the pre-ablaut period) and certain aspects of IE proper
and Anatolian consonantism (especially the occurrence of IE voiceless aspirates
ph, *th*, *kh*) are held by proponents of the theory to have been affected by the presence
or absence of PIE consonants ('laryngeals') which have left few obvious continuants.
The number and nature of these laryngeals are in dispute. One form of the theory
sets up four laryngeals (see 1 b. above), one or more of which may have been allopho-
nic with another in the series. The multiplicity of symbols are not intended to represent
separate phonemes, but rather (a) the fact that they have been used in the literature
on the subject, and (b) to indicate ignorance and/or lack of agreement on the nature
of at least some of these laryngeals.

4. EFFECTS ON VOCALISM. — Whether earliest PIE had only one vowel[5] or an indeter-
minate number of vowels, the vowel or vowels were ultimately affected and diffe-
rentiated qualitatively and quantitatively by adjacent laryngeals. Full-grade Anatolian
and IE proper *ă* are held to imply that an earlier vowel was immediately preceded or
tautologically followed by a laryngeal [A] with specifically *a*- coloring quality, e.g.,
*Aeg- > IE *ag-* > Lat. *agō*. Pre-ablaut occurrences of *ē*, *ā* are held to imply the loss
of an immediately following laryngeal [X] before a surviving consonant or in pause,
with compensatory lengthening of the vowel, e.g., **meAteEr* > **mātēr*. Similarly
IE *ə* would be the result of a reduced vowel with following laryngeal under the same
conditions, e.g., **eX* > **ə* in **peAteEr* > **pətér*. Finally, all apparent instances of

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[4]   By IE proper is meant the continuant of PIE after the departure of Anatolian from PIE. In effect,
this is Sturtevant's distinction between IE and IH (Indo-Hittite).
[5]   The present author at one time (*The root and its modification in PIE*, Baltimore 1947) held that
mnovocalism was an essential ingredient of the theory. He no lonoger considers it essential.

initial vowel in the continuant languages are held to imply the loss of an initial laryngeal, e.g., *$Ee > $*$e$, *$Ae > $*$a$.

5. EFFECTS ON CONSONANTISM. — There is fair agreement among laryngealists that, by regressive assimilation, a voiceless stop with immediately following voiceless laryngeal yielded an IE proper voiceless aspirate, e.g., *$pH > $ IE *ph*, while a voiceless stop with immediately following voiced laryngeal yielded a voiced stop, e.g., *$pZ > $ IE *b*. Schematically, the converse should also obtain, i.e., voiced stop with immediately following voiceless laryngeal yielding a voiceless stop, e.g., *$bH > $ IE *p*, and voiced stop with immediately following voiced laryngeal yielding a voiced aspirate, e.g., *$bZ > $ IE *bh*. If these equations are true, it becomes probable that laryngeals 3 and 4 in 1 b. above were voiced allophones of nos. 1 and 2.

6. Evidences[6] of the effects of the laryngeals have been adduced from reflexes in every one of the historical PIE continuant languages. In at least three of these, Hittite Armenian, and Albanian, it has been claimed that direct continuants of laryngeals are still to be observed, although only Hittite exhibits a recognized laryngeal continuant in other than initial position.

a. *Hittite.* — Hittite remains the best single source for PIE laryngeal continuants and some have gone so far as to deny a laryngeal reflex in the IE proper languages if not attested in Hittite. At least two of the PIE laryngeals are transparently continued in Hittite as *h*. Initially an *h* appears in words which have cognate IE vocalic initials. Thus, *hannas* 'grandmother': Lat. *anus* 'old woman', OHG *ana* 'grandmother, ancestress' $<$ *xen-. Initial *γ is scarce; perhaps best here is *henkan* 'death, pestilence, fate' : Lat. *nex* 'death', OIr. *ēc* id.; *heyus* 'rain' and *hekur* 'summit' have no satisfactory IE cognates. Postvocalic anteconsonantal *h* appears in words which have cognate IE long vowels, e.g., *pahhs-* 'protect': Lat. *pāscō* 'feed, pasture', Skt. *pāti* 'protects' $<$ *$pex(s)$-; *mehur* 'time, point of time, occasion': Lat. *mētior* 'measure', Goth. *mē-l* 'time', Skt. *māti* 'measures' $<$ *$me\gamma$-. In final position derivative verbs in *h* (e.g., *walhh-* 'strike, defeat, destroy', *sanhh-* 'approach, ask for, try') and denominatives in *-ahh-* have a sg.2 ipv. in *-ah* which can be equated with the sg.2 ipv. of the Latin first conjugation.

b. *Greek.* — Without recourse to cognates in Hittite and Armenian, two developments in Greek indicate reflexes of PIE laryngeals: (1) Prothetic vowels. Not all cases of Greek prothetic vowels derive from the vocalization of a PIE laryngeal, but sure cases are: ἀνήρ 'man', Lat. *nērō*, Skt. *nara-*: Skt. cpd. *viśvānara-*, *súnara-*; ἄησι 'blows', cf. Lat. *ventus* 'wind', Goth. *waian* 'blow', Skt. *vāti* 'blows, *vāyus* 'wind',

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[6] The evidence in 6a - j is essentially a distillation of the evidence for laryngeals in the works cited in § 2 above and of previous Kerns-Schwartz publications. With few exceptions, no further reference will be made to particular authors.

Lith. *viéjas* id. (with, of course, guaranteed initial laryngeal in Hit. **hwantas*, pl. nom. *huwantes* 'wind'); (2) Reduced grades of dissyllabic heavy bases. Cowgill has demonstrated that the reduction of a base **pelə-/plē-* when suffixed (characterized) by **-nó-* would have yielded forms like Skt. **priṇá*, Lith. **planas*, Goth. **flans*, Welsh **elan* instead of the actual *pūrṇa, pilnas, fulls, llawn* < **pḷnós* < **pḷXnós*. Only on the basis of a laryngeal residue can we explain such forms as πίμπλημι 'fill', aor. ἔπλησα, πλήρης ' 'full', πλῆθος great number, multitude': Lat. *plēre* 'fill', p.p. *com-plētus*. Precisely similar circumstances explain e.g., τίθημι, ἵσταμι, δίδωμι < **dZeX-*, **steX-*, **deX-* (**deΩ-* ?). Cowgill observes that this evidence "would be sufficient to establish the [laryngeal] theory without help from Hittite *h*'s or any other sound effects ... attributed to laryngeals."[7] Cowgill's specific denial of laryngeal provenance for Greek initial ζ- is very probably valid.

c. *Italic.* — (1) Sapir's posthumously published suggestion that Phryg. βονο-κ 'woman' exhibits a laryngeal reflex was developed by Sturtevant into a full-fledged formula (IH Ɂx and *hx* > IE *k*) and most recently further developed by Martinet and Watkins to a point of almost canonical acceptance within the laryngeal credo (but specifically rejected by Cowgill). It may be preferable to describe the collision of these laryngeals as developing a glide which remained after the disappearance of the laryngeals themselves, but in any event the equation seems valid in the face of the supporting evidence. Morphologically this is best represented by the IE pf. sg. 1 *-ka* < **-H-Ae* faithfully preserved in Homeric κ- perfects and the 'aorists' ἔθηκα, ἧκα, ἔδωκα. This fully explains Lat. pf. *fēcī*: Gk. ἔθηκα < **dZeH-X-* and Lat. *iēcī*: Gk. ἧκα. But more important for Italic in general and Latin in particular is the Lat. productive suffix *-āx* in e.g., *fugāx, audāx, mināx*, the factitive nature of which is confirmed not only by Hit. *-hh-* (cf. e.g., *allapa-* 'spittle': *allappahh-* 'to spit', *idalu-* 'bad, malicious': *idalawahh-* 'injure') but also by Skt. *-ka-* 'making' in compounds.

(2) Martinet's postulation of a labiovelar laryngeal is dramatically confirmed by the *v-* perfects of type Lat. *strāvī, amāvī* (and very probably also the P-Italic *-f-* perfect). At one fell swoop we can now account for both the vowel length and the labial.

(3) Watkins demonstrates that the *-na-* verbs in Latin equate with Skt. type *punāti*, e.g., *cernō, linō, sinō, spernō, sternō -temnō, tollō* (< **tolnō*), *-cellō* (< **celnō*) all of the third conjugation, can only be satisfactorily explained as the zero grade of **-neX-* > **-nX-*, with full grade yielding *-nā-* in Sanskrit, and zero grade > *-nă-* in Italic. Watkins further points out that the assumption of zero grade is paralleled by other nasal infixes, e.g., Lat. *iungō*: Skt. *yunakti*.

d. *Celtic.* — The phonology of Celtic underwent such drastic changes (with lenition, nasalization, gemination, and extensive syncope) that it is difficult to equate e.g.,

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[7] *Evidence*, p. 94. It is only fair to state, however, that on the previous page Cowgill also states, "there is relatively little in Greek itself that can be explained better by the laryngeal theory than without it."

Old Irish etyma with their IE congeners. Evidence for laryngeal effects in Proto-Celtic rests largely upon forms which can be equated with laryngeal continuants in Hittite. Thus Welsh *gwynt* 'wind': Hit. **hwantas*' id. and OIr. *lān* 'full' < **plXnós*. Other sure forms are OIr. *écen*, Welsh *angen*, Corn., Brt. *anken* 'need, necessity': Hit. *henkan* 'fate, death, pestilence'; OIr. *feraim* 'pour': Hit. *hurn-* id. It must be admitted that the Celtic evidence for laryngeals is tenuous and that the phonology can be explained as readily without the laryngeal theory. But a promising field for investigation could be a study of lenition, the phonological phenomenon most characteristic of this branch of the IE family. Lenition is essentially aspiration and this might be partly due to the aspirating power of laryngeals as well as or instead of the result of original intervocalic position (cf. e.g., OIr. *rethim* 'run': Skt. *rathas* 'chariot'). Again, unlenited initials might be due to a laryngeal final which, with following initial non-syllabic, could have formed a juncture cluster which held its ground against the leniting process.

e. *Tocharian*. — Perhaps, in origin, a close neighbor of Hittite, Tocharian vocalism performs almost as significant a service for the placement of PIE laryngeals as does Hittite, with its continuant *h*, for the actual existence of laryngeals. There is wide general agreement that WT *ā/a* (accented/unaccented), ET *ā/a/ä* (conditions described in SSS pp. 42-43) represent IE *ə*, which in turn usually represents a laryngeal residue, cf. e.g., WT *pācer*, ET *pācar* 'father': Gk. πατήρ, Skt. *pitar-* id.; WT *tkācer*, ET *ckācar* 'daughter': Gk. θυγάτηρ, Skt. *duhitar-*; WT *yasar*, ET *ysār* 'blood': Hit. *eshar*, Gk. η̃αρ, ἔαρ id. The Tocharian forms < **EsXr*[8] [**Ɂsxr*] and the Hittite form is here merely a confirmation; WT *suwo* 'pig' < **swX* -as seen in Lat. *sūs*. The difficulty Sturtevant had in explaining Hit. *pahhur* 'fire' (IHL 36f.) in view of the IE cognates is now resolved by the agreement of Gk. πῦρ with WT *puwar* < **pwX-*; since the Hittite form presupposes **peXw-* it is the Hittite form which is aberrant here and Tocharian confirms the placement of the laryngeal. Again, as e.g., in Italic (see 6c [1] above), Tocharian exhibits the *-k-* glide < **hx* in ET *tākā* 'I was' as well as the *-nā-* infixes. A curious confirmation of both these elements occurs in such forms as WT *kätkanaṃ* 'pass': *kättaṅkäṃ* id. indicating that the infix < **nH* stands before a characterizing suffix beginning with *X*!

f. *Germanic*. — With the single exception of Hittite no other historical language has been subjected to so thorough an investigation by laryngealists as Germanic. The reason may well be that like Celtic, Armenian, and Albanian the phonology has undergone such drastic alterations that the velocity and violence of change could be attributed, in part, to the aftereffects of laryngeals. At least two sets of phenomena are associated with laryngeal reflexes.

[8] Note here the suggestion of Kerns-Schwartz that Tocharian may show a reflex of the 'first' laryngeal in initial position, *JAOS* 83.361 f (1963).

(1) First suggested by W. M. Austin in his etymological note on NE *big* (Lang. 15. 249 [1939]) and developed by H. L. Smith as the Verschärfung in Germanic (Lang. 17.93-98 [1941]), the group of forms showing a doubling of IE intervocalic -*i̯*- and -*u̯*- after short vowels finds a ready explanation as laryngeal reflexes. Smith was able to exhibit a large number of bases of type $Cé X i̯/u̯$- (C = any stop consonant, *é* any vowel under the accent) > IE $C\check{e}i̯/u̯$- in e.g., OE *brēowan*, OHG *briuwan* 'brew'; but the same root with shift of accent as $CeXi̯/u̯$-' < IE $Cə(X)i̯u̯$- (with X here representing not a laryngeal but rather a laryngeal reflex) in ON *brugga*, OSw *bryggja* 'brew.' Thus Goth. *glaggwō* 'strict' can be almost mechanically restored to *$ghl_e Xu̯$-' and full grade *$ghléXu̯$-.

(2) Another group of forms first linked by Austin to laryngeals has Gmc. -*k*/*g*- for IE -*u̯*- cf. ON *nǫkkue*, OE *naca* 'boat': Gk. ναῦσ, Lat. *nāvis* with *totally* unexpected gutterals where other IE languages show resonant (= sometimes syllabic) continuants. It is not unlikely that the same phonological considerations as in the Verschärfung prevail here, since the same sets of sounds are involved.

g. *Indo-Iranic.* — The thesis that the voiceless aspirates of Sanskrit derive from stop with following laryngeal reflex goes back to Saussure, who actually expressed this view in 1891, long before the discovery and decipherment of Hittite. Many scholars had held the entire voiceless aspirate suspect for IE, restricted as a possibly secondary development to Indic and to a lesser extent Iranic. The startling discovery of Kurylo-wicz in 1927 that Hittite *h* was Saussure's *A* not only established laryngeals as a working hypothesis in PIE phonology, but also made the Sanskrit voiceless aspirates a cornerstone of that hypothesis.

(1) Hoenigswald[9] demonstrates that although the voiceless aspirate series functions as a unit phoneme in historical Indic, the series clusters like double consonant clusters rather than unit consonants, cf. e.g., avoidance of initial clusters in Indic with voiceless aspirates (except initial *s*- [*sth*-] and following -*y*- [*khy*-]). Lehmann[10] demonstrates that velar voiceless aspirates do not undergo palatalization before IE frontal vowels and concludes therefrom that *kh* was not a unit phoneme in Sanskrit at the time of this palatalization, since a consonant of some kind intervened between the guttural and the palatalizing agent. The other voiceless aspirates would also have to be non-phonemic at this stage. This would indicate that laryngeals or their direct continuants were still in existence in at least early Indo-Iranic, and since palatalization of gutturals is demonstrably later in time than the effects of Grassman's Law, the voiceless aspirates became unit phonemes comparatively late in Indo-Iranic. The intervening laryngeal had to be voiceless, since a voiced laryngeal would have voiced the preceding voiceless stop, as e.g., *peZ- 'drink' yields Skt. (redup.) *pibati*: *pāti* and is confirmed by OIr. *ibid* and Lat. *bibit*.

(2) Iranian retains the same distribution of the voiceless aspirates as voiceless

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9 Particularly, *Evidence*, pp. 13 ff.
10 Particularly, *PIE* pp. 80 ff.

spirants *f*, θ, *x* = *ph*, *th*, *kh* (cf. Av. *safa-*: Skt. *śapha-* 'hoof', Av. *bara-θa*: Skt. *bhara-tha* 'thou bearest', Av. *haxa* 'friend': Skt. *sakhā*), although, unlike the Sanskrit the Avestan spirants can come from other sources than just the voiceless aspirates.

(3) In external sandhi a final voiceless stop *-t* is regularly voiced before initial vowel *a-* > *-da-* despite the frequent occurrence of internal *-ta-*. In some cases the Indic initial vowel must have been preceded by *Z. The resultant sandhi 'rule' would then be another instance of analogical extension.

h. *Armenian.* — Austin demonstrated[11] in 1942 that initial Armenian *h* in certain words continued a PIE laryngeal, e.g., Arm *han*: Hit. *hannas*, Lat. *anus* 'old woman', Arm. *hov*: 'wind': Hit. *hwantas*, Lat. *ventus*. In medial position a vocalized laryngeal also has its reflex, cf. Arm *hayr* 'father': Gk. πατήρ, Skt. *pitar-* < *peHtér*. Lastly a vocalized laryngeal is certainly reflected in the Armenian 'prothetic' vowel precisely as it is in Greek, cf. e.g., Arm *astł* 'star': Gk. ἀστήρ, Lat. *stella*; Arm. *anun* 'name': Gk. ὄνομα, Lat. *nomen*; Arm *erek* 'evening': Gk. ἔρεβος 'darkness of the lower world', Goth. *riqis* 'darkness.'

i. *Balto-Slavic.* — Aside from sure etymologies with IE words containing laryngeal reflexes, two facts of Balto-Slavic phonology are relevant to the laryngeal theory: (1) Balto-Slavic intonations; and (2) Proto-Baltic *ō: *ā (these fell together in Slavic).

(1) Like the other IE languages, most long vowels in Balto-Slavic result from loss of one-time laryngeals between vowel and consonant with compensatory lengthening of the vowel. Normally this long vowel is indicated by an acute accent, but it must be admitted that, even under the most favorable circumstances, the Balto-Slavic phenomena must be buttressed by comparison with their IE congeners to confirm laryngeal reflexes, e.g., *búti, dúoti, diéti* < *bū-, *dō-, *dē- but without confirmatory etymologies the long vowels could have arisen from other than laryngeal reflexes. Unique for Balto-Slavic, however, is the fact that *VRə* (*V* = any vowel, *R* = any resonant) before stop or sonant > *VR*. While the long vowel was eventually shortened, the original length is reflected by an acute accent as opposed to the circumflex over original short diphthongs.

(2) While the normal ablaut of IE *ō : *ē is Balt. *ā*, there are also ablaut alternations of Balt. *ō* with *ē*. It is only where Balt. *ō* is not an ablaut alternation of *ē* that the reflex of a PIE laryngeal [γ] can be adduced. Here, too, recourse must be had to confirmatory etymologies. Thus Lith. *dúoti* 'give': Gk. δίδωμι < *deγ-; *júosti*: Gk. ζώννυμι < *įeγs-. Such forms as infinitives in *-uoti* (a secondary lengthening) and the sg. nom. of *n-* stems in *-uo* have no laryngeal reflexes.

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[11] Mention is sometimes made of the Kerns-Schwartz 'refutation' of Austin's thesis that some initial Armenian *h*'s reflect a laryngeal. There was never any such 'refutation.' In their article, *On the placement of Armenian*, Lang. 18.226 f (1942), the writers took some exceptions to the placement of Armenian within Anatolian. But Austin's demonstration of a laryngeal continuant in Armenian was at least as spectacular as, and perhaps even more cogent than, for instance, Hamp's much later demonstration of a laryngeal continuant in Albanian.

j. *Albanian*. — Albanian phonology presents greater difficulties than even Celtic with extensive loss of final syllables, syncope especially before the accent, loss of medial *r* in clusters, and widespread consonantal assimilation in clusters. Nonetheless, Hamp has demonstrated continuation of a laryngeal lost in Hittite, initial *h*- (= Sturt.-Sapir ə, Kuryl. ə⁴). Examples are striking, e.g., Geg. *hut* 'empty', Tosk *hutonj* 'gape': Gk. αὗτως, αὖσιος 'empty, useless', Goth. *auþs* 'deserted, waste' with related forms in Lat. *au-*, Skt. *ava* 'off, away'; Geg. *hi*, def. *hini*, Tosk *hī*, def. *hiri*, Vaccarizzo *γé*, Sophiko *híi* 'ashes': Gk. αἴθος, OIr. *aed* 'fire, heat', Skt *édha-* 'firewood', and probably Hit. *ā-* 'be hot' < *aya- < *hei-; Geg *hŷj* 'I enter', Vacc. *yíṅ*, Soph. *híiṅ* Hit.; *u- we/a-* 'hither', Lat. *au-* (see also above *hut* etc.) 'away', OIr. *o, ua* 'from' < *hew; Geg *hyp* 'mount', Vacc. *γípiṅ* 'I mount', Soph. *hípiṅ* id.: Hit. *up-zi* '(sun) rises', Skt. *upa* 'up, hither', *upári* 'over.' Hamp also cites several cases of *γi > Alb. *ǵ* e.g., Soph. *ǵéšiṅ* 'gird': Gk. ζωστός, Lith. *júostas* 'girt'; Geg *gjanë* 'alluvial mud', Tosk *gjer* 'soup': Gk. ζύμη 'dough', Lith. *júšė* 'poor soup', OPr. *juse* 'meat broth.' An *E* laryngeal effect is also seen in e.g., Geg. *emën* 'name', Vacc. *émer*: OIr. *ainm-ⁿ*, OCS *imę* id. < *Enmen.

7. The evidence of laryngeals and their reflexes in the historical languages is striking, even spectacular. It is still impracticable, however, to recast PIE and IE phonology in terms of laryngeals as full-fledged phonemes of that phonology. But even where we emerge with a phonology now canonical for PIE and IE, many dark corners have been illuminated by the theory. We are no longer at the threshhold of phonological advance in this area, we have crossed that threshhold.

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A NUMISMATIC SOLUTION
OF TWO PROBLEMS IN EURIPIDES*

The numismatist usually employs literary evidence to define and identify his coins. Here I shall reverse the process and show how numismatic evidence can illuminate a literary document.

The literary document in question is a pair of well-known passages in Euripides, which share a long history of being almost invariably studied together and an equally long history of keeping their meaning, and their translators, divided:

Iphigeneia in Tauris, 113-14:

ὅρα δέ γ' εἴσω τριγλύφων ὅποι κενόν
δέμας καθεῖναι

Orestes, 1371-2

κεδρωτὰ παστάδων ὑπὲρ τέραμνα
Δωρικάς τε τριγλύφους

Although archaeologists and philologists have studied and theorized over these passages,[1] the view today is that no theory thus far advanced is satisfactory. The texts have been emended,[2] the usual meaning of the Greek twisted and knotted to fit a conjecture, yet no translation has been brought forth without some taint of illegitimacy. One towering obstacle stands in the way of a solution. Numismatic

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[1] Helen H. Bacon, *Barbarians in Greek Tragedy* (New Haven, 1961), 132-7; Euripide, *Oreste*, ed. and trans. F. Chapouthier and L. Méridier, Coll. G. Budé, vi, 1 (Paris, 1958), 87, note 2; E. Lapalus, *Le fronton sculpté en Grèce, des origines à la fin du IVe siècle* (Paris, 1947), 44-58; R. Demangel, "Anecdota dorica, II, 3, Triglyphes en terre", *BCH* lxxi-lxxii (1947-8), 359-68; *idem,* 'Regula', *BCH* lxvi-lxvii (1942-3), 264-8; *idem,* "Fenestrarum Imagines", *BCH* lv (1931), 117-63; *idem,* "Sur un vers d'Euripide", *REG* xliv (1931), 320-3; W. Miller, *Daedalus and Thespis; The Contributions of the Ancient Dramatic Poets to our Knowledge of the Arts and Crafts of Greece* i, Architecture and Topography (New York, 1929), 105-17; Euripide, *Iphigénie*, ed. and trans. L. Parmentier and H. Gregoire, Coll. G. Budé, iv (Paris, 1925), 118, note 2; O. M. Washburn, *AJA* xxii (1918), 434-5; G. Perrot et Ch. Chipiez, *Histoire de l'art dans l'antiquité* vii (Paris, 1898), 480, note 3.

[2] For a criticism of arbitrary emendations see Agustin García Calvo, "Critica y Anticritica", *Emerita* iii (1952), 133-52.

evidence, I shall try to show, dramatically removes that obstacle. So far as I know, this is the first study that brings such evidence to bear on the problem.

Divergent as prior theories have been, there is agreement on one important point. No one disputes the fact that Euripides, in both passages, was referring to the superstructure of the buildings, the top of the temple in the *I.T.*, and the top of the palace in the *Orestes*. In the *I.T.*, Orestes or Pylades was planning to enter the shrine by climbing to the top and letting himself down into it. The word used is καθεῖναι. In the *Orestes*, the Phrygian escaped from the palace by coming out above the beams and frieze. The word used is ὑπέρ. Thus in both instances the top of the building was involved.

The crux of the problem lies in the words ὑπὲρ Δωρικάς τε τριγλύφους. How was it possible to enter or leave the building 'above' the triglyphs, that is, 'above the frieze'? Archaeologists could find no example in preserved buildings of an opening *above the frieze* or any other evidence of such an opening. They therefore directed their search elsewhere on the building. To put the opening elsewhere, however, obliged them not only to reshape the text but also to introduce a new theory of the origin of the Doric frieze, and to attribute to Euripides a very pronounced antiquarian interest. One theory supposed that the metopes in their earliest form, well before the age of Euripides, had been open and that it was just such a primitive constructional arrangement as this that the poet had in mind.[3] Thus, the ὑπέρ of the *Orestes* and the εἴσω of the *I.T.* were translated 'between'; the egress or the ingress was assumed to be 'through an opening between the triglyphs'. According to another theory, it was the primitive triglyph that was open, not the metope, and this was the frieze-arrangement that the poet had in mind.[4] The words ὑπέρ and εἴσω were translated 'through'; egress or ingress was 'through the triglyphs'.

Still another theory, which did not change the manuscript readings and which rejected the existence of an 'open' metope and an 'open' triglyph at any stage in architectural history, located the opening in one of the spaces that was left free between the beams of a flat roof.[5] This theory assumed that the roof involved was the spaced-beam roof of the so-called *maison troyenne*, a small, simple, primitive house of the heroic age. Even if we allow Euripides the most enthusiastic antiquarian interest and the most expert knowledge of primitive construction, it is difficult to think of his conjuring up a building without a pediment[6] for his temple or such a simple primitive house for his palace.[7]

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[3] For bibliography see Coll. G. Budé (1925), 118, note 2, and Coll. G. Budé (1959), 87, note 2.
[4] Lapalus, *op. cit.* 57-58; Demangel, *BCH* lxxi-lxxii (1947-8), 359-68; *idem, BCH* lxvi-lxvii (1942-3), 264-8; *idem, BCH* lv (1931), 117-63; *idem, REG* xliv (1931), 320-3.
[5] Coll. G. Budé (1959), 87, note 2; Perrot and Chipiez, 480, note 3.
[6] On the pediment or pediments of the temple of Apollo at Delphi see Euripides, *Ion*, ed. H. S. Owen (Oxford, 1939), p. 84, note; Miller, *op. cit.* 56; Bacon, *op. cit.* 132, note.
[7] Cf. Perrot and Chipiez, 480, note 3, "Cette hypothèse répugne à l'idée que, dans plus d'un passage du drame, le poête cherche à donner de la magnificence du sanctuaire de l'Artemis Taurique."

All these theories, unconvincing at best, must now be set aside. The evidence offered by coins for the very period in which Euripides was writing indicates that there were openings in temple buildings *above the frieze*. It was on the unique evidence of the coins that I was able to show that the famous temple of Artemis at Ephesos was to be reconstructed with three openings in its pediment (Fig. 1); before that time, no one had realized that such a windowed pediment was so early an architectural convention.[8] The late-classical temple of Artemis at Ephesos had, beyond a shadow of doubt, these openings in the tympanum; it is almost as certain that its predecessor, the so-called Croesus temple of the sixth century B.C., had similar openings. When we move forward to the Hellenistic and Roman periods, we have both numismatic and archaeological evidence that this unusual architectural arrangement was employed on Anatolian and Syrian buildings. And what is particularly important is that the convention was oriental in origin and that for centuries it continued to be adhered to in the Middle East.[9]

The fact that the temple of Artemis was an oriental shrine and that the convention of the pedimental windows was peculiar to the East provides singularly appropriate evidence for our problem. The temple in far off Tauris was also an oriental shrine. Euripides certainly knew about the great and famous temple at Ephesos;[10] why could it not have served as his model of an oriental shrine? If we make the very plausible assumption that the Taurian shrine, like the temple of Artemis, had one or more openings in the pediment, Pylades or Orestes in the *I.T.* would have entered through the tympanum window and thus let himself down from there to the inner side of the frieze.[11] The word εἴσω means 'inside' or 'within' or 'on the inner side of'.[12] We may therefore keep the manuscript reading and translate:

> See where there is an empty place to let
>
> Your body down to the inner side of the triglyphs.

Let us bring on our stage still another and similarly legendary scene of theft. On the Oenochoe Iliaca in the Bibliothèque Nationale, Diomedes and Odysseus are shown carrying off the Palladium which they have just stolen out of the goddess's shrine (Figs. 2 and 3).[13] Here we can see exactly how the two thieves had penetrated

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[8] Bluma L. Trell, *The Temple of Artemis at Ephesos* (*NNM* 107) (New York, 1945).

[9] Bluma L. Trell, "A Further Study in Architectura Numismatica", *Essays in Honor of Karl Lehmann*, ed. Lucy Freeman Sandler [*Marsyas*, Supplement I] (New York, 1964), 344-58.

[10] Aristophanes mentions the temple in the *Clouds* 599-600. For the close contacts between Athens and Anatolia in the fifth century see Anne Bovon, "La représentation des guerriers perses et la notion de barbare dans la 1ʳᵉ moitié du Vᵉ siècle", *BCH* lxxxvii (1963), ii, 591; F. Chapouthier, "A propos d'un éventail ou de l'exotisme dans Euripide", *REA* xlvi (1944), 209-16.

[11] Is the order of the temple important? Artists portrayed the temple sometimes as Ionic, at other times as Doric. John H. Huddilston, *Greek Tragedy in the Light of Vase Painting* (London NY, 1898), figs. 18, 20, 21 (Ionic), fig. 19 (Doric).

[12] Washburn, *op. cit.* 434-5.

[13] This is the first time, as far as I know, that the little temple has been pictured *in toto*. The window seems to have been partially obliterated. Was this done in cleaning the vase? The first report of the

into the shrine: it is just as we supposed Pylades or Orestes entered the Taurian temple, for, in the pediment on the oenochoe, there is a window.[14]

So much for the passage from the *I.T.* which referred to a temple. Now let us turn to the passage from the *Orestes* which refers to a palace. The discovery of the pedimental arrangement at Ephesos, made on the basis of the coins, focused attention on other early representational art, the only evidence available to the archaeologist for the superstructure of early buildings. One fruitful source of information has been found in the miniature models of buildings. Many of these of early date show windowed pediments. There are an Italian urn (Fig. 5), a model from Medma (Fig. 6), a Locrian pinax (Fig. 7), and, most important, the well-known Argive Heraion model (Fig. 8).[15] In the Argive model we have by an archaeological accident, as it were, evidence from the very region where the wild scenes of the *Orestes* were enacted, that is, the Argolid. The model was not intended to represent the palace of Agamemnon any more than it was intended to represent the house of Circe, as has been claimed,[16] but it does unquestionably give us an idea of what a house looked like, particularly to Euripides. It shows us that domestic buildings, even before the age of great stone temples, had pediments. It shows us, too, that a domestic building could have a 'porte-fenêtre'[17] in the pediment. I do not think we are straining the evidence if we see in the painted frieze of the model, with its alternating dark markings and light spaces, a reference to the Doric frieze; and if this is so the opening is actually ὑπὲρ Δωρικὰς τριγλύφους. The Locri pinax, which shows the window of the pediment behind a grill, indicates without any question that the opening was above the triglyphs.[18] If we make the very natural assumption that Euripides had such a house in mind, then the Phrygian in the *Orestes* made his escape through an opening in the pediment. Again, without changing the text, we may translate:

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vase which Reinach used (see Fig. 2) describes the pediment of the little temple as "... un fronton dans lequel on voit un rectangle..." (*Mémoire sur la collection de vases antiques, trouvées en mars 1830 à Berthouville (arrondissement de Bernay) par Aug. Prévost* [Extrait du tome VIe des *Mémoires de la Soc. des Antiq. de Normandie*] (Caen, 1832), p. 45, pl. iv, fig. 3.

[14] It is interesting to note that a similar window was suggested for the scene wall at the theatre of Tyndaris through which the *deus ex machina* was supposed to emerge (Fig. 4). The reconstruction has been questioned by Armin von Gerkan in "Zu den Theatern von Segesta und Tyndaris", *Festschrift Andreas Rampf* (Cologne, 1950), 88.

[15] There is no agreement yet on the date of these models or on the question whether they represented sacred or secular buildings. But the new reconstruction of the Argive Heraion model has been accepted as a representation of domestic architecture (G. Oikonomos, *Arch. Eph.* 1931, 1 ff., cited by Lapalus, *op. cit.* 43). The Italian urn seems to be in the tradition described recently by Raymond Bloch, *The Origins of Rome* (London, 1960).

[16] Cf. Lapalus, *op. cit.*, 47.

[17] The distinction between 'window' and 'door' is a matter of modern semantics. Ch. Picard, 'Percées tympanales ou niches de fronton', *Rev. Arch.* xxxiv (1949), 30, overcame the difficulty by calling the openings 'portes-fenêtres'.

[18] Demangel, *BCH* lxvi-lxvii (1942-3), 265-7, explained the vertical mouldings as grills; cf. Lapalus, *op. cit.*, 57.

Fig. 1. Reconstruction of the temple of Artemis at Ephesos; after Trell, *The Temple of Artemis*, frontispiece, and Ch. Picard, *Manuel d'archéologie grecque, IV*e *siècle*, iv, i (Paris, 1954), fig. 71.

Fig. 2. Oenochoe Iliaca from Berthouville, France, Bibliothèque Nationale, Cabinet des Médailles et Antiques; after S. Reinach, *Répertoire de reliefs grecs et romains* i, *Les ensembles* (Paris, 1909), p. 69, 1.

Fig. 3. Detail of the Oenochoe Iliaca (by courtesy of the Bibliothèque Nationale, Paris).

Fig. 4. Reconstruction of the theatre at Tyndaris; after Margareta Bieber, *The History of the Greek and Roman Theatre* (Princeton, 1939), fig. 339. (See above, n. 14.)

Fig. 5. Cinerary urn in the form of a house from central Italy, eighth to seventh century B.C.; after Trell, *The Temple of Artemis*, pl. xxvii.

0.47 × 0.24 × 0.295

Fig. 6. Model of a temple (?) from Medma, Italy, ninth to eighth century B.C. (?); after Demangel, *BCH* lxvi-lxvii (1942-3), fig. 10.
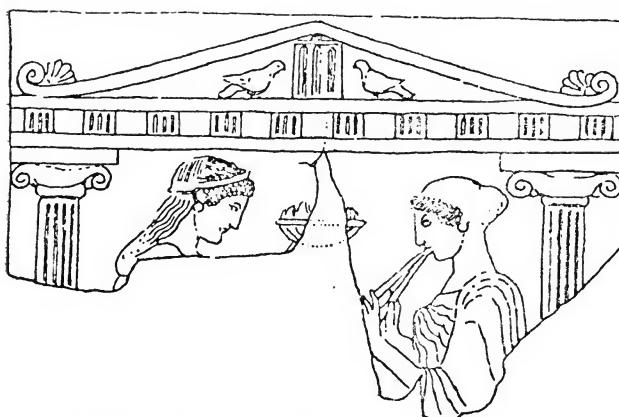

Fig. 7. Relief from Locri; after Demangel, *BCH* lxvi-lxvii (1942-3), fig. 11.
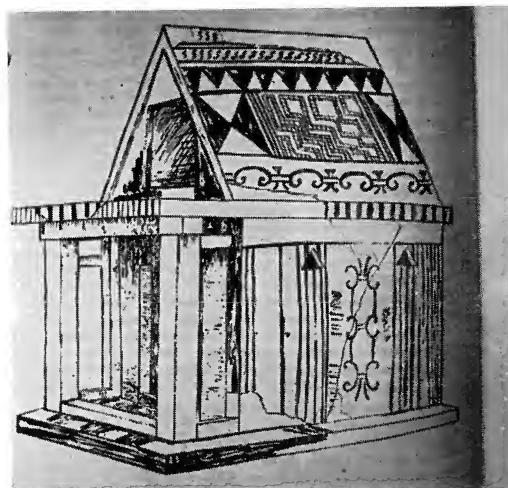
Fig. 8. Model of a house from the Argive Heraion, end of eighth century B.C.; after Demangel, *BCH* lxvi-lxvii (1942-3), fig. 1.

Fig. 9. Coin of Baalbek (Heliopolis) showing the temple of Zeus Heliopolis, issued under Septimius Severus; after Trell, *The Temple of Artemis*, pl. xvii, *b*.

Fig. 10. Coin of Baalbek (Heliopolis) showing the temple of Zeus Heliopolis, issued under Septimus Severus, British Museum; *BMC Galatia*, etc., pl. xxxvi, 2.

(I fled) above the cedar beams of the
Women's colonnade[19] and Doric triglyphs.

We have seen how numismatic and archaeological documents have proved the existence of openings in the pediments of temples and dwellings. There is no doubt that one of the functions of these openings was to provide a way in and out of the attic. In the case of the great temple at Baalbek, for example, where a window in the tympanum was restored on the basis of coin-evidence (Figs. 9, 10), the distinguished scholar Henri Seyrig suggested that the opening provided a passage-way for servants to clean the eaves.[20] We now see from Euripides that the pedimental window also provided a passageway for interlopers.

The Argive Heraion model and other models have been used to explain the passages in Euripides — but with results much different from those given above.[21] Why no one ever suggested the window as the means of entrance or egress is probably not very hard to explain. It was only after the numismatic evidence led to the discovery of the existence of such windows in the temple of Artemis at Ephesos that attention was focused on this unusual architectural arrangement and began to produce studies on the function of the openings.[22]

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[19]   For the meaning of παστάς cf. Euripides, *Orestes*, ed. N.Wedd (Cambridge, 1942), note on line 1371.
[20]   Henri Seyrig, "Heliopolitana", *Bull. du Musée Beyrouth* (Paris, 1937), 99. We know from Euripides himself what a nuisance the birds would be (*Ion* 154 ff.).
[21]   See p. 104, n. 4, above.
[22]   A complete bibliography is included in Trell, "A Further Study in Architectura Numismatica", cited above, p. 105, n. 9.

LARISSA BONFANTE WARREN

ROMAN TRIUMPHS AND ETRUSCAN KINGS: THE LATIN WORD *TRIUMPHUS*

The triumph was a particular and unique Roman ceremony. Yet the Romans themselves knew that its form was Etruscan.[1] It is now possible, I believe, to identify the moment when the word *triumphus* entered the Latin language, and to attempt to visualize the context within which both word and ritual became a part of Roman civilization.[2]

[1] W. Ehlers, *RE*, s.u. *triumphus*, cols. 504-505. E. Norden, *Aus Altrömischen Priesterbüchern* (Lund 1939-1940), 228. I. S. Ryberg, *Rites of the State Religion in Roman Art*, MAAR 22 (1955), 20 f. *Contra*, E. Wallisch, "Name und Herkunft des römischen Triumphes", *Philologus* 99 (1955), 245-258, who argues that the triumph as a whole — name, ritual, and insignia — entered Rome only in the Hellenistic period, this being the earliest possible date for the concept of divinization. That there is no proof for the alleged "divinization" of the *triumphator* in the early triumphs is quite true; but because some of the elements of the triumph can be shown to belong to the Hellenistic period does not mean that all the triumph must be dated that late. On this see R. M. Ogilvie, *A Commentary to Livy*, Books 1-5 (Oxford 1965).

I try to sort out pre-Etruscan, Etruscan, and Hellenistic elements in the Roman triumph in my forthcoming article in *JRS* 60 (1970), XXf. On the controversy over the alleged divinization of the *triumphator* there is a copious bibliography: see especially W. Warde Fowler, "Jupiter and the Triumphator", *Class. Rev.* 30 (1916), 153 f.; J. S. Reid, *JRS* 6 (1916), 117 f.; L. Deubner, *Hermes* 69 (1934), 316-324, all of whom rightly, in my opinion, deny the temporary deification of the *triumphator*. Yet recently even S. Mazzarino, *Dalla monarchia allo stato repubblicano* (Catania 1945), 29, and G. Dumézil, *La religion romaine archaïque* (Paris 1966), 286, still accept this theory.

[2] A. Ernout, *BSL* 30 (1930), 82 ff., has set the example and laid the bases for such studies in his work on Etruscan elements in Latin; for assistance with linguistic references, I thank my father, Giuliano Bonfante. — Roman adoption of Etruscan language and dress tells us a good deal about the relationship between the two cultures. While the Romans took over the dress of the Etruscans, they did not adopt their language, but only certain cultured words (including *litterae*, the very word for literacy). The question of the beginning of Roman literacy, moreover, is difficult to answer. Various scholars — see Leumann-Hofmann, *Lat. Gr.* (Munich 1928), 44, with refs.; Hammarström, Sommer, and others — thought the Latins adopted the Greek alphabet by way of Etruscan. *Contra*, most recently, M. Guarducci, *Epigrafia Greca* (Rome 1967), 219: according to the author the Latin alphabet comes directly from Cumae, but shows Etruscan influence. The use of the third letter — Latin *C* for Greek Γ — as a voiceless stop, when the Greek is voiced, is certainly Etruscan. Yet even Ernout, who believes the alphabet came by way of Etruscan and in general holds Etruscan influence on the vocabulary to have been considerable, points out the absence of any influence of Etruscan literature, with the exception of a few words like *camenae*, *histrio*, *persona*, and words connected with popular farce. Evidently the Romans were just beginning to learn how to read under the Etruscans; by the time they learned, it was all Greek.

Briefly, my conclusions are the following: The word *triumphus* came into Latin from the Etruscan language at the moment of closest contact between Romans and Etruscans, under the Etruscan monarchy of the late sixth century. It was originally a musical term, connected with the martial music which accompanied Etruscan military organization and religious ritual. The Romans adopted it for the newly transformed version of an ancient rite, which was now called the triumph. The older, Etruscan form of the word, *triump(h)e*, was still preserved, however, in the shout used both in the victory procession and the ancient hymn of the Arval Brotherhood.

For the word *triumphus* was a shout long before it became a word. The cry, *triumpe, triumpe...* was repeated five times as the climax of the *Carmen Aruale*.[3] It was repeated again and again as the soldiers' cheer accompanying the victorious general as he ascended the Capitol to sacrifice before the temple of Jupiter Optimus Maximus. Poets echoed this cheer, still ringing in their ears: "miles io magna uoce triumphe canet" (Tibullus II.5.118); "io triumphe, non semel dicemus io triumphe" (Horace *Odes* IV.2.49).[4]

Triump(h)e is the earliest form found in Roman history. This shout then gave its name to ritual and procession, called *triump(h)us* (recorded in Ennius and Plautus); from the noun was formed the verb, *triump(h)are*.[5] Varro tells us the verb developed from the shout of the soldiers in the triumph: "sic triumphare appellatum, quod cum imperatore milites redeuntes clamitant per urbem in Capitolium eunti 'Io triumphe!' "[6]

The archaic form preserved in the text of the Arval Brothers' hymn, in an inscription of 218 A.D., as well as Cicero's remark that he could still remember the time when *triumphus* was pronounced *triumpus*, show that the aspirate did not come into Latin before *ca.* 100 B.C.[7] The etymology of French *tromper* 'to triumph by cheating',

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[3] Bibliography for the Carmen Fratrum Arualium, Norden, *op. cit.*, 107 f., esp. 236 ff., text. M. Nacinovich, *Carmen Arvale* (Rome 1933). The text is preserved in an inscription of 218 A.D. (*CIL*, 1², 2, 2) found in Rome; included, e.g., in Pisani, *Testi latini arcaici e volgari* (Turin 1960²), 2.

[4] Cf. Horace, *Epode* 9.21,23. For the magical repetition of the word, in the triumph as well as in the Carmen Fratrum Arualium, see the discussion by L. Bernardini, *Studi classici ed orientali*, Pisa 5 (1955-1956) 84, who quotes Appel, *De Romanorum precationibus* (Giessen 1909), 212. Cf. Varro, *RR*, instructions preceding a magic song: "Haec ter nouiens cantare iubet"; Ovid, *Fasti*, 4.778: "Haec tu conuersus ad ortus/dic quater", etc. Norden, *op. cit.*, 233, on the shout repeated twice, uerba geminata, cf. Ar. *Ach.* 271 Φαλῆς, Φαλῆς etc.

[5] *Triumphare*, Varro, Cicero, Vergil, etc. *Triumphator* (post-class.), Apuleius, inscriptions, Minucius Felix. *Triumphalis* (also with the meaning of the later *triumphator*, one who has had the honors of a triumph), Suetonius, Cicero, Horace, Livy. Ernout-Meillet, s.u. *triumpe*. Walde-Hofmann, s.u. *triumphus*, with bibliography.

[6] Varro, *LL* 6.68.

[7] The aspirate came perhaps from the Greek by "hyperhellenization". M. Niedermann, *Historische Lautlehre des Lateinischen* (Heidelberg 1953³), 94-95. On the contrary, Kretschmer, *Sprache*, in Gercke-Norden, *Einleitung in die Altertumswissenschaft* (Leipzig 1927³), 112, gives both the change from β to p and the aspirate as proofs of the Etruscan derivation of *triumphus*; though the aspirate *could* be a sign of Etruscan influence, it probably belongs to a later period, and concerns a different phase of Etruscan influence from the one we are dealing with in this paper.

preserves this early form without aspirate in the popular language, which actually never adopted the cultured pronunciation.[8]

As I hope to show in a moment, the words *triumpus* (*triumpe*) and *tripudium* are both early forms, contemporary, and, in fact, closely related. In the text of the *Carmen Aruale*, *tripudium* appears as *tripodatio*, and in the verb form *tripodare*, just before and after the transcription of the hymn, and refers to the dance executed by the Arval Brothers as they sang this sacred, archaic song: "Ibi sacerdotes clusi succincti libellis acceptis carmen descindentes tripodauerunt in verba haec: 'Enos Lases iuuate...(etc.).' Post tripodationem deinde signo dato publici introier(e) et libellos receperunt." The early form of the word, with *pod-* (alternating form of *ped-*) which had not yet developed, by the action of the intensive accent, into the later *pud-* of *tripudium*, seems to confirm the extreme antiquity — before 500 B.C. — of the *Carmen Aruale*.[9] It is surely no coincidence that *tripudium* is the word used to describe the ritual dance of another ancient priesthood, the war-like Salii: Salii "per urbem ire canentes carmina cum tripudiis solemnique saltatu" (Livy I.20.4). *Tripudium* is translated in this context as "war dance".[10]

According to Varro the Latin word *triumphus* was probably derived from the Greek word θρίαμβος: "id a θριάμβῳ ac Graeco Liberi cognomento potest dictum." Varro's somewhat dubious tone — "potest dictum" — seems due to the fact that there was no obvious connection between the original meaning of the Greek θρίαμβος, a hymn in honor of Dionysos, later an epithet of the god, and the Roman *triumphus*, which

[8] Cf. Quintilian, *Inst.* 1.5.20. Walde-Hofmann, s.u. *triumpe*: "rom. **trumpare*". Ernout-Meillet. *Tromper* comes from the popular pronunciation, which never adopted the Greek aspirate: cf. κόλαφos, It. *colpo*, Fr. *coup*, Sp. *golpe*. F. Sommer, *Griechische Lautstudien* (Strassburg 1905), 154, n. 2. G. Bonfante, "La lingua delle atellane e dei mimi", *Maia*, N.S., fasc. 1, 19 (Jan.-Mar. 1967), 16 (page of the offprint). See V. Väänanen, *Le Latin vulgaire des inscriptions pompéiennes*, *Abhandlungen der deutschen Akademie der Wissenschaften zu Berlin* (1966³), 55: "Le latin n'avait pas d'occlusives aspirées du type θ, φ, χ du grec; les aspirées grecques étaient rendues sommairement par *t*, *p*, *c* dans le latin archaïque et populaire." Cf. W. Meyer-Lübke, *Romanische Grammatik* I, 61.289; and I.32.

[9] If the intensive accent operated, as now seems certain, from *ca.* 500-300 B.C., the *Carmen Aruale* is to be dated earlier than 500 B.C. G. Bonfante, M.L. Porzio Gernia, *Cenni di fonetica e di fonematica* (Torino 1964), 38. The new inscription of Lavinium (sixth-fifth century B.C.), which has *Podlouquei* from Πολυδεύκei with syncope, seems to show that the intensive Latin accent is older (end of the sixth century?) than was usually believed ("frühestens gegen Ende des 5. Jahrh." Altheim, *Gesch. der lat. spr.*, 1951, 302); cf. G. Bonfante, *Arch. glott. it.*, 50 (1965), 185; 51 (1966), 24, n. 44. Pisani, *Testi... op. cit.*, 11, A6 ter. The *lapis niger* of the Roman Forum still has *iouestod, iouesat* without syncope (sixth century B.C.).

[10] Livy, 1.20. A. de Sélincourt, in his translation (Books 1-5, *The Early History of Rome*, Penguin Classics, 1960), renders the word as "the triple beat of their ritual dance," thus preserving the technical musical significance. Cf. Catullus, 63.26; Cicero, *de div.* 2.72. Ernout-Meillet, Walde-Hofmann, s.u. *tripudium*. Text for the Carmen Saliare and bibliography, Pisani, *op. cit.*, (*supra*, note 3), 36. The same action of *tripodare* is frequently mentioned in the Iguvinian Tables (the word is *ahtrepuřatu*, *atrepuřatu*, *ahatripursatu*, *atripursatu*, *atropusatu*). This proves both the antiquity and the great extension of this custom in ancient Italy. See e.g. C.D. Buck, *Elementarbuch der oskisch-umbrischen Dialekte* (Germ. tr., Heidelberg, 1905), index s.u. *ahatripursatu*, 208. G. Devoto, *Le Tavole di Gubbio* (Italian translation of the Tables, Florence, 1948), x, 36, 40, 50, 62, 84, etc., and his great edition of the *Tabulae Iguvinae* (Rome, 1962³) index s.u. *ahatripursatu*.

had nothing to do with Dionysos. It was only in Roman times that Greek historians used the word θρίαμβος to translate the Latin *triumphus*; then the triumph itself was called, if necessary, μέγας θρίαμβος, to distinguish it from the ἐλάττων Θρίαμβος or *ouatio*.[11]

The traditional derivation of *triumphus* suggested by Varro and accepted by many modern linguists does not account for the phonetic changes from θρίαμβος to *triump(h)us*, which could *not* have taken place in the passage from Greek to Latin. Since Greek β does not change to Latin *p*, while Greek β *does* change to *p* in Etruscan, Etruscan mediation is proved, above all, by this change from β to *p*.[12] If the word θρίαμβος had entered Latin directly from the Greek, it would have been **triambos* in archaic times, **thriambus* from Cicero on, when cultured speakers pronounced the Greek aspirate.[13]

The vowel change, from *a* to *u*, can be accounted for in either one of two ways. It *could* have been caused by the Latin vowel weakening, due to the effects of the initial stress. This would give us a loose kind of date for the word, between the sixth century and *ca.* 300 B.C.[14] (If the word θρίαμβος had entered into Latin *after* 300 B.C., it would have given us **triampus*.[15])

An alternative explanation, even more attractive for our theory, is that since this passage from Greek *a* to a *u* already occurs in Etruscan[16] the word was taken over without change into Latin. A third clue which could also point in this direction is the

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[11] Liddell-Scott, *A Greek-English Lexicon*, s.u. θρίαμβος. Cf. *infra*, note 24, and text. S. Ferri, "Metodo archeologico e Carmen Fratrum Arvalium", *Studi Classici e Orientali* (Pisa) 5 (1955-6), 87 f., 102; and "Il Carmen Fr. Arv. e il metodo archeologico", *Latomus* 13 (1954), 390 f., rejects the derivation of *triumphus* from θρίαμβος. *Ouo, ouare* (Eng. ovation) from Greek εὐοῖ, exclamation used in the cult of Dionysos (e.g. Aristophanes, *Ach.* 1294). Here, too, the word derived from the shout either by way of Etruscan — like *triumphus* — or directly from the Greek; in any case at a very early period, in the sixth century B.C., before *eu* became *ou* in Latin (cf. *Podlouquei, infra*, note 9). Leumann-Hoffmann, *Lat. Gr.*, 38; Walde-Hofmann and Ernout-Meillet, s.u. *ouo*. Festus 213.7: "ouantes, laetantes ab eo clamore quem faciunt redeuntes ex pugna uictores milites, geminata O littera." Cf. the important discussion in Plutarch, *Marcellus* 22.

[12] Etruscan mediation, Kretschmer, *op. cit.*, 112. Norden, *op. cit.*, 228 (Campanian Etruscans). G. Devoto, *Storia della lingua di Roma* (Bologna 1944), 90, 91. P. De Francisci, "Intorno all'origine etrusca del concetto di *imperium*," *St. Etr.*, 24 (1955-6), 34 f.

[13] *Supra*, notes 7, 8.

[14] The *terminus post quem non* would be ca. 300 B.C., after which the initial stress was no longer in effect. *Supra*, note 9.

[15] This fact, among others, speaks against the theory of E. Wallisch (*supra*, n. 1).

[16] Eva Fiesel, *Namen des griechischen Mythos in Etruskischen* (Göttingen 1928), 63 f.; 85, quoted in Walde-Hofmann, s.u. *triumphus*. She gives as examples *Priumne* from Πρίαμος, *Artumes* from ʾΑρταμις. M. Pallottino, *Testimonia Linguae Etruscae* (Florence 1954), no. 783, Priumne. Of course it is theoretically possible to attribute the change of *a* to *u* to the Latin rather than to the Etruscan stress accent (cf. Lat. *taberna*; *contubernium*: see Pisani, *Gramm. Lat.*[3] [Turin 1962], 27 f., ≠ 42; and cf. *ex-imo, ad-imo*, from *-emo*); but the change β > p, the ending *-e* of *triumpe* and the semantic and historical arguments presented in the text definitely point to Etruscan for the change *a* > *u*. This change appears in the "long" Etruscan inscription from Pyrgi, where we read *veliiunas* (*velianas* in the "short" inscription); the date of both is about the end of the sixth century B.C., so that θριαμβος should have entered into Etruscan before that date. See Pallottino, *Scavi nel santuario etrusco di Pyrgi* (Rome 1964), 81.

ending of the word *triumpe*. The *-e* has been explained either as an imperative,[17] or as the sign of a vocative. According to Norden, ὑμέναιε and Ἴακχε are examples of exclamations which precede in time the declined names derived from this form:[18] a simple and more logical explanation is to consider the form an Etruscan masculine nominative.[19] The climax of the Carmen Aruale and the triumph would then originally have been not an acclamation (vocative) or an exhortation (imperative), but an exclamation in Etruscan; something like our "Hurray!" Of course, *triump(h)e* may have been misunderstood by the Romans themselves, and quite early, as a vocative or an imperative. Yet, though the noun *triumphus* and the verb *triumphare* developed soon after this, the word *triumpe* in Latin long remained an exclamation, without syntactical connections. Plautus uses it this way in *Pseudolus* 1051: "Ite hac, triumphe! ad cantharum recta uia!" It is hard to translate *triump(h)e* as other than an exclamation, a parody of the shout all Romans heard in the triumph. The context, one of those farcical battle scenes so frequent in Greek New Comedy, is taken over by Plautus and given a typically Roman touch of 'local color'. We have already seen the frequent use of *triumphe* by the poets, who were interested in recreating the sound of the cheers of the triumph.[20]

Where did the *Etruscans* get the word? There are two possibilities. *Triumpe* was either adopted directly from the Greek θρίαμβος — with the phonologic changes we

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[17] Ferri, *Studi classici ed orientali, op. cit.*, 103 (of the Arval hymn): "con un imperativo, non un vocativo come in Orazio *Carmen* 4.2.49." (*supra*, text).

[18] Norden, *op. cit.*, 228. K. Marót, *Kultus und Mythos* (Budapest 1937), 250 f., gives a psychological explanation of such a development. L. Deubner, *Attische Feste* (Berlin 1932), 73, actually says that the gods Iakchos and Hymenaios developed from the shouts "Ἴακχε and Ὑμέναιε. The god Iakchos, whose image was taken during the Eleusinian procession from the temple in Athens, was nothing but a personification of the Ἴακχε -shout. "In the case of *triumphus*, we have an example of a shout developing into a word; with Iakchos and Hymenaios, the shouts develop into gods!

[19] *-e* is a normal ending for Etruscan of proper names masculine singular nominatives, as a glance at inscriptions shows. On Etruscan mirrors, for example, we see many a *Hercule*, from Ἡρακλῆς and *Patrucle* from Πάτροκλος; elsewhere, *Marce* from Marcus and many other names. Pisani, *Storia della lingua latina* (Turin 1962), 155 f. Cf. *Le lingue dell'Italia antica oltre il latino* (Turin 1953), 295. See M. Pallottino, *Elementi di lingua Etrusca* (Florence 1936), 34 f., for nominative endings; index for proper names. For this ending in *-e* see Eva Fiesel, *op. cit.*, 94 ff.; Alessio (unpublished letter) thinks these forms are fossil Latin (perhaps, rather, Umbrian) vocatives; cf. Fr. *un monsieur*.

[20] The form of the word has the appearance of an imperative, "march!" and was perhaps interpreted as such; but there is no word **triumphere*, to give such an imperative form. No wonder the *lectio facilior*, *triumphi*, found in two manuscripts, was adopted by Leo: one can then translate *cantharum triumphi* quite easily 'the tankard of victory'. Mss. C, D omit the line entirely. Leo accepts the reading of BT and takes it to modify *uia* 'quasi triumphali'. Ernout (*Belles Lettres* 1962[3]): "*triumphi* ex voce cantharum pendere rectius censeas;" but he accepts the reading *triumphe* of the Ambrosianus, the best ms., and translates "Triumphe! En avant, par ici, droit aux cruches." P. Nixon (Loeb ed., London 1951) accepts *triumphi*: "Forward march! Straight for the tankard of victory." Norden instead (*op. cit.*, 228) recognizes, with Goetz and Lindsay, the correctness of *triumphe*, which echoes the shout of the triumphal procession, not yet fitted into Latin grammar with a normal declension. The technical, military context is echoed from 1. 1049, "quin hinc metimur gradibus militaris?", translated by Nixon, "Why don't we step it out of here, double time?"

have seen — or it came, not from Greek, but from a third language, the same language from which the word came into Greek.[21]

The word θρίαμβος is, indeed, not native Greek, though it apparently came from an IE language. θρίαμβος belongs to a series of words — ἴαμβος, θρίαμβος, διθύραμβος — the first element of which consists in a number which is IE in form: ἴ- = Ϝι (= Latin *uīgintī*) = 2, θρι = τρι = 3, διϑυρα- = τέτταρα = 4.[22] The last elements, which they all have in common, — αμβος, may perhaps be related to Sanskrit aṅga, "limb", aṅgana-, "step", "act of walking."[23] The words seem to be musical, or dance "measures", something like a two-step, three-step, a four-step rhythm.

From this IE, non-Greek, language, the word came into Greek, where it originally meant simply a religious procession with song and dance, though ϑρίαμβος is already connected with Dionysos in the earliest appearances of the word, in the sixth or the fifth century (e.g. Pratinas, 1, 15, ϑριαμβοδιϑύραμβε).[24]

The word *triump(h)e* came into Etruscan from this language either directly, as it came into Greek, or it came by way of Greek; while *triump(h)e* almost certainly came into Latin by way of Etruscan. So much, then, for a brief genealogy of the word.

Etruscan kings and tyrants were no doubt as accustomed as the Greeks were to hearing acclamations at their athletic competitions, and at related processions and victory celebrations.[25] Unfortunately we have no record of these shouts, calls and cheers, though tomb paintings and reliefs give us a good idea of what these festivals, games and dances looked like in the late sixth and fifth centuries, and we can imagine the impact they must have had on the Romans of that time. For the Greeks, of course, we have the evidence of Pindar concerning the shout or ὀμφή which greeted the victors of the games at the religious competitions: δίς ᾿Αθαναίων νιν ὀμφαὶ κώμασαν

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[21] A. J. Van Windekens, "Greek φρίαμβος et Latin triumphus", *Orbis* 1953, 489 f., calls this non-Greek language "Pelasgian".

[22] Cf. Doric Ϝῑκατι, with Ϝι; but various other languages, e.g., Sanskrit, *vimsati-h* with *i* like (ἴαμβος. W. Brandenstein, "ιαμβος, φριχμβος, διφυρυμβος", *Indogermanische Forschungen* 53 (1936), 34-38. Bibliography in Walde-Hofmann, s.u.

[23] For δίφυρα τέτταρα cf. Sanskrit čatur-, Gr. τυρταῖος. Sommer, *op. cit.*, (n. 8), 59 f. H. Peterson, "Die altindischen Worter auf amba", *Indogermanische Forschungen* 34 (1914-1915) 236-237. The connection of the element -αμβος in ῑ-αμβος; φρι-αμβος etc. with Sanskrit aṅga- "limb", "member", which is semantically attractive, could be accepted without any difficulty earlier in this century, when the words were considered to be Greek (the θ of θρίαμβος is, however, impossible to explain from Greek, and δῑθορ- from τεσσαρ- even worse). If we admit these words to be IE, but not Greek, we have to admit for this IE pre-Greek language the same change *g^w to β (aṅga- αμβos) as in Greek, which is not quite obvious, and certainly not proven.

[24] J. B. Hofmann, *Etymologisches Wörterbuch des Griechischen* (Munich 1966; orig. ed. 1950) s.u. θρίαμβος; cf. H. Frisk, *Griech. Etym. Wörterbuch* (Heidelberg 1960); for references, Stephanus-Hase-Dindorf (1895). D. Page, *Poetae Melici Graeci* (Oxford 1962), 367, reads Pratinas 15 as θρίαμβε διθύραμβε.

[25] The Etruscans were in contact with Delphi and Olympia. Caeretan treasury at Delphi, H. H. Scullard, *The Etruscan Cities and Rome* (Cornell University Press 1967), 184 f. Pausanias 5.12.5 names the Etruscan king Arimnestus, who dedicated a throne at Olympia, as the first non-Greek to bring a gift to Olympian Zeus.

(*Nem.* X.34); and at Olympia the traditional acclamation, τήνελλα καλλίνικε, was repeated three times, as the καλλίνικος ὁ τριπλόος of *Ol.* IX.2.[26]

When Rome became a city — became, literally, "civilized" — at the time of the Etruscan monarchy, the word *triumphus* entered the language as just such an acclamation, in the context of both music and the organization of the army, elements of civilization which the Etruscans brought to the Rome of the Tarquins.

We have seen that the series of words to which θρίαμβος — and also *triump(h)us* — belong, etymologically speaking, are all musical. They each refer to poetry, song, and dance, something like 'two-step', 'three-step', 'four-step', the series being musically complete: there is no 'five-step'. ἴαμβος, θρίαμβος, διθύραμβος indicate, respectively, an iambic meter, a hymn to Dionysos, an epithet of Dionysos. All these are later meanings of the words, but still related to poetry, singing and dancing — three phases of music which were not separate in antiquity, as they are for us today. Meter, step, and rhythm were all interrelated.

The Romans learned about music from the Etruscans: not only were musical instruments adopted from Etruscan models — trumpets, as well as other instruments — but Etruscan musicians and dancers were brought into Rome at all times.[27] The musicians in the triumphal procession were Etruscans, as they were in the *pompae* in general. Who else would have taught the Romans to cheer, *triumpe*? At the high point of Italian music in Europe, too, the musicians in any orchestra were Italian; today, musical terminology is still all Italian. At concerts and the 'Opera' the conductor gives directions in Italian. At the end of the performance, the audience may shout "Bravo!" in Italian, even if they do not know what it means. What is more natural than that the Romans should have continued to cry out in Etruscan *triumpe*! at the victory processions of their generals, and that the word should have been used, in a more technical sense, by the Arval Brothers in their ancient ritual hymn?

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[26]   A. Sonny, "Zu Triumphus", *Archiv fur Lateinische Lexicographie und Grammatik* 8 (1893), 132, supposed the existence of a hypothetical shout, *τρίομφος, corresponding to our own "Three cheers!" This, he suggests, was taken over by the Romans from Sicily, whose nobles competed at Olympia and other sanctuaries, and whose victors were celebrated by Simonides, Pindar, and Bacchylides. The author offers this as an explanation for the etymology triumphus- *τρίομφος (sc. πομπή or κῶμος) suggested by J. M. Stowasser, *Dunkle Worter* (Vienna 1890), I.xii. A weakness of the theory is that it takes only the processional, victory triumph into account. Of course, the *triumpe* of the Carmen Aruale *could* derive from the "Io triumpe" of the triumph; but the dates seem to be contemporary. A further linguistic argument against Sonny's etymology is that no *τρί-ομφος is attested in any Greek text. For the cheer, cf. the victory cry, τήνελλα καλλίνικε, invented by Archilochus (fr. 119; the first word imitates the sound of an instrument, and has no meaning, as "Hurrah" has no meaning for us today, or as *triumpe* had no meaning in Rome) and adopted for athletic victors, greeted with this cheer ever after, e.g., Aristophanes, *Ach.* 1227.

[27]   Strabo, 5.200. Refs. in K. O. Müller, W. Deecke, *Die Etrusker*, II, 196 f.; R. A. L. Fell, *Etruria and Rome* (Cambridge 1924), 76; M. Pallottino, *Etruscologia* (Milan 1968⁶), 275 f.; G. Fleischhauer, *Etrurien und Rom. Musikgeschichte in Bildern*, Vol. 5, fasc. 5 (Leipzig 1964). It is perhaps useful to recall that the Latin word *hister* (from which derives *histrio*) came from Etruscan, as attested by Livy, Valerius Maximus, Plutarch (Walde-Hofmann, s.u. *histrio*). This was probably true of *persona*, too, as well as other words having to do with music and the stage (Ernout, *loc. cit.*). Cf. *supra*, note 2.

In fact, the text of the Arval Brothers' ritual seems to contain a translation of the foreign technical word *triumpe*: it is its Latin equivalent, *tripudium*. The word is used in the verbal form *tripodare*: "tripodauerunt in uerba haec..." (then follows the text of the hymn, ending with the repetition of the climactic *triumpe*). Recently the *tripudium* has been tentatively — and temptingly — identified with a trisyllabic foot with initial stress in the older Italic tradition. Accordingly R.G. Tanner, who attempts to reconstruct the meter of this song as it was sung and danced in the Arval Hymn, says, "if such a trisyllabic foot existed, *tripudium* would be its obvious and natural name."[28] Proceeding on this assumption, he works out some neat choreography for the hymn, with alternating jumping and turning movements. "Limen sali, sta berber," for example, is alternately a *uersus* and a *tripudium*, the sense of the *uersus* being an injunction to *leap*; while the injunction to *stand* is "naturally fulfilled on the third step of the *tripudium* occurring at the end of the movement. The dancers are calling on the god to share in their dance, invoking him to join in each action as they do it." If I am right in thinking that *triumpe* actually means *tripudium*, then in the final verse, *triŭmpĕ, triŭmpĕ, triŭmpĕ, triŭmpĕ, triŭmpĕ*, in which Mr. Tanner sees five climactic *tripudia*, the dancers are indeed calling out the steps to be danced.

So much, for the moment, for the dance. As for the word, Silvio Ferri has rightly pointed out the relationship between *tripudium* (*tripodare*) and *triumpe* in this text. Though his etymology, *tripudium > triumpe*, is impossible, a definite connection can nevertheless be found with the help of the middle term θρίαμβος. *Tripudium* and θρίαμβος are exact equivalents in their formation: cf. the elements *tri-pudium*, "three-foot" (Latin *pes, pedis*; Greek πούς, ποδός) or "step", and θρί — αμβος (Sanskrit aṅga-) "three-limb" (-"step"). *Triumpe*, from θρίαμβος, would contain the same elements and would therefore also be the equivalent of *tripudium*, both meaning a three-step dance; or, in the context of the Arval hymn, martial dance. We would therefore have, practically, a bilingual rendering of the term: *triumpe = tripudium*.[29]

I also believe that the word *triumpe* was connected with martial music, within the context of the sweeping change in military organization which the Etruscans introduced into Rome.[30] In favor of this theory is the war-like connotation of both the triumph and of the Carmen Aruale. The text of the *Carmen Aruale*, though unfortunately only partially understandable, apparently consists of a prayer addressed

[28] *CQ* 55 (1961), 214 f.
[29] Ferri, *op. cit.*, 103; he assumes, however, that the *tripudium* was the original term, even though no trace of this word can be found at such an early date: "evidentemente in origine il trionfo si chiamava *tripudium*, ma il termine era già in disuso, o, per lo meno, non compare già più nei Fasti Trionfali." For *tripudium*- θρίαμβος, see *supra*, nn. 11, 22, 23; Sommer, *op. cit.*, 58-59; Brandenstein, *op. cit.*, 34.
[30] De Francisci, *op. cit.*, 27, n. 37: "che sotto gli Etruschi sono stati perfezionati gli ordinamenti militari... è un punto che mi sembra sicuro, anche se si può discutere su taluni particolari. Gli ordinamenti etrusco-romani stanno infatti in relazione con la tattica oplitica e questa, attinta a modelli greci, è stata certamenta introdotta in Roma dagli Etruschi ai fini dell'espansione nel Lazio e nella Campania."

to *fere Mars*, "wild Mars", the war-god.[31] The climactic *triumpe*, five times repeated, agrees with its interpretation as a *tripudium*, or war-dance, like the *tripudium* which the Salii danced with the shields or ancilia of Mars.[32] The name of the *Fratres Aruales*, the brotherhood who sang and danced this hymn at their annual rites, comes from *aruom*, showing that this very ancient priesthood, antedating the Etruscan rule, had originally been connected with agricultural rites. The *Ambarualia*, a magic procession around the territory of Rome, was also intended to protect the fields of the early, pre-Etruscan city. For this reason this rite also propitiated Mars, the war god.[33] Scholars today agree that there was no strict separation between an agricultural and a warlike function of these priesthoods and rites; we do not, therefore, have to suppose a change from a peaceful agricultural to a warlike focus, or *vice versa*.[34] At the end of the sixth century, under Etruscan influence, it was the outer trappings, rather than the function of the priesthood which changed. The rites of the Arval Brothers were apparently reformed, more 'modern' music added, and a martial hymn to Mars adopted, ending with the Etruscan word *triumpe*.

The *triumph*, too, was changed at the same time, under Etruscan influence. Originally it was a procession like the *Ambarualia*, or *amburbium*, or *lustrum conditum*, when the sacrificial animals are led around the borders to be protected. The procession marched from the Campus Martius, through the area of the Circus Maximus and, circling the Palatine, entered the Forum and went through the Via Sacra. The procession had as its goal not only the *lustratio* of the army and of the city at war, but also the dedication of the *spolia* by the commander as the fulfillment of his vow. The Etruscan kings at the end of the sixth century changed the form of this rite,

[31] For the interpretation of the Carmen Aruale as a war-song to accompany a war-dance or *tripudium*, R. Meringer, "Enos Lases Iuvate", *Wörter und Sachen* 7 (1921), 302-304. *Contra*, review by A. Nehring, *Glotta* 13 (1924), 302-304. Much of the weight of such an interpretation rests on the meaning of *fere Mars*. In spite of the generally accepted warlike character of Mars (emphasized by J. Dumézil, *Jupiter Mars Quirinus* IV [Paris 1948] 169), there have been attempts to explain Mars as an agricultural divinity; e.g., Nehring, *op. cit.*, "ferus=fruchtbar"! F. Mentz, "Zum Carmen Arvale", *Zeitschrift für vergleichende Sprachforschung* 70 (1952) 221f. Nacinovich, *op. cit.*, summarizes the discussion down to his time, showing in conclusion (29) how the original protective spirit, formerly called upon to help in the fields, was later called upon by the Roman citizens to protect their army.

[32] Salii, *RE*, s.u. Ogilvie, *op. cit.*, 1.20.3: "We may infer that the original Salian ritual was apotropaic and of very great antiquity, but that it was converted to a military purpose, presumably under Etruscan systematization". Cf. *supra*, n. 10.

[33] Ernout-Meillet, Walde-Hofmann, s.u. *Arvales*, *Ambarvalia*. J. Marouzeau, "Le latin, langue des paysans", *Mélanges Vendryes* (Paris 1925), 251-264; and notes by G. Bonfante, *REL* 12 (1934), 157 f.; 13 (1935), 44 f. For the Ambarualia, recent discussion and previous bibliography in A. Alföldi, *Early Rome and the Latins* (Jerome Lectures 7, Ann Arbor 1963), 296 f.; G. Wissowa, *Religion und Kultus der Römer* (Munich 1912²), 142 f., 561 f.; K. Latte, *Römische Religionsgeschichte* (Munich 1960), 41f. Cf. *Amburbium*.

[34] Cf. *supra*, nn. 30, 31. Bibliography for the Roman army, De Francisci, *op. cit.*, 30, 57. A change of functions is suggested by Meringer, *op. cit.*, who thinks the warlike character of the priesthood *preceded* its later peaceful functions, when Rome no longer needed to make war on its neighbors every spring. His theory, it seems to me, reverses the situation. The name, Aruales, is very ancient and clearly fits the earliest habits of the Roman people, so well attested by their language.

though they never changed its basic elements: the temple of Jupiter Capitoline, built at this time, became the goal of the procession; the dress of the victorious commander was the king's own robe and insignia; and the whole procession was organized as a military parade.[35] Both the *Carmen Aruale* and the triumph preserve the memory of their reorganization in the original Etruscan form of the word *triumpe*.

The Romans, who always seem to have been warriors, had to learn to be soldiers, and that military organization which was the cause of their success they owed to Etruscan order and method.[36] Roman tradition never admitted this debt outright, but it gives strong proofs of it. One of the strongest is the Servian constitution: Plinio Fraccaro shows that this has a military basis, and dates from the time of the monarchy, before the consuls.[37] According to Roman tradition (Livy I.43), Servius Tullius organized Rome into centuries,[38] originally fighting units, later used to assemble the citizens for voting. Now every army marches to music. See Plautus, *Amphitryon* 127, and Appian, *Pun.* 8.66, on the use of Etruscan musicians in the triumphal procession.

Various words and names confirm the actuality of the Etruscan military contribution. The Mamurrus who made the *ancilia* for the Salii has an Etruscan name. An Etruscan 'Lucumo', under a Hellenized name, Lygmon, is said to have brought military organization to Rome (Propertius IV.1.29).[39] Linguistic evidence shows

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[35] In effect, the church and the army. G. Dumézil, *La Religion romaine archaïque* (Paris 1966), 229 f. (a war-like Mars as protector of the fields: *Ambarualia*), 241 ("unité fondamentale de la function du Mars romain est établie"...), 285 (route of the triumph). G. Charles-Picard, *Les trophées Romains* (Paris 1957), 117, 125 (Mars receives *spolia opima* and trophies), 427 (relationship of rite of carrying trophies on *fercula* and dedication of *spolia opima*). Otto Brendel drew my attention to this last point; I hope to return to it in another article on the triumph.

[36] As Vegetius says at the beginning of his *Military Institutions*, "... Nulla enim alia re uidemus populum Romanun orbem subegisse terrarum nisi armorum exercitio, disciplina castrorum, usuque militiae". What he calls the *ius armorum*, organization of troops, they learned from the Etruscans; the first real army of Rome was the creation of later kings. Flavius Vegetius, *De re militari*, I.1. Fell, *op. cit.*, 73 f. E. McCartney, "The military indebtedness of early Rome to Etruria", *MAAR* 1 (1917), 121 f.

[37] Fraccaro, *op. cit.*, *infra*, note 45. A. Momigliano, "Interim Report on the Origins of Rome", *JRS* 53 (1963), 95 f.

[38] Servius Tullius was Etruscan: for his name see E. Benveniste, "Le nom de l'esclave en latin", *REL* 10 (1932), 429 f., and esp. 436; also Walde-Hofmann, s.u. The Etruscans, then a more advanced civilization, apparently brought in the word and the concept of slavery. The Indo-Europeans (and therefore probably the early Latins) did not have slaves, as it seems, being in what can be called a barbaric and perhaps half-nomadic stage of culture: certainly no IE word for slave can be reconstructed: every IE language has a different word (Lat. *seruos*; Gr. δοῦλος; Old Church Slavic, *rabu*; Sanskrit, *dāsá-*, etc.). For the Emperor Claudius' identification of Servius Tullius with the Etruscan Mastarna, see J. Heurgon, "L'état étrusque", *Historia* 2 (1957), 68 f. M. Pallottino, review of S. Mazzarino, *Dalla monarchia allo stato republicano* (Catania 1945), *St. Etr.* 20 (1947), 322; A. Momigliano, *L'opera dell' imperatore Claudio* (Florence 1932), 32 f.

[39] Mamurrius (Mamurra) is an Etruscan name. Nehring, *op. cit.*, 304. Livy 1.20.3 and 4, and commentary in Ogilvie, *op. cit.*, Prop. 4.2.61, *et al.*, W. Schulze, *Zur Geschichte der lateinischen Eigennamen* (Abh. d. Ges. d. Wiss., Göttingen, N.F. v. 2, 1904), 228, 360. Propertius 4.2.49 f.:
    ... et tu, Roma, meis tribuisti praemia Tuscis,
    (unde hodie Vicus nomina Tuscus habet)
    tempore quo sociis uenit Lycomedius armis
    atque Sabina feri contudit arma Tati."

that several Etruscan words dealing with military matters were taken over into Latin. Indeed, the *only* two words Varro gives as specifically of Etruscan origin are musical and military: *subulo*, a flute player ("subulo Tusce tibicen dicitur" — Festus 309M) and *balteus*, a sword-belt. Other military, technical terms seem to be plentiful — Ernout lists *clupeus* (*clipeus*), *pluteus*, *balteus*, *culleus*, *malleus*, *caduceus* (Etruscan mediation, from the Greek καρύκειον), *antemna* (nautical). The names of the three types of Roman knights listed by Varro, *celeres*, *flexuntes*, *trossuli*, seem to be of Etruscan derivation. The Romans apparently learned the use of a metal helmet and its name from the Etruscans; "cassidam autem, a Tuscis nominatam (dicunt): illi enim galeam cassim nominant" (Isid. *Orig.* 18.14).[40] The words *seruos*, *uerna*, as well as the institution of slavery have also been shown to have been taken into Rome from Etruria as a mark of civilization; selling prisoners of war being a more civilized custom than killing them.

Archaeological evidence brings further confirmation. A brief look, in this context, is due an attractive theory concerning the military origin of the Roman toga. As Emeline Richardson has shown, this derives directly from the Etruscan rounded mantle, the τήβεννα (Polybios, 10.4.8), which first appears on Etruscan monuments soon after 550 B.C., and becomes the most common Etruscan garment by the end of the sixth century B.C.[41] According to Eric Baade, the Etruscans invented the rounded τήβεννα for convenience: as a military garment, it was the equivalent of the short, pinned rectangular Greek χλαμύς, which is not found in Italy.[42] In Rome, the toga was adopted from the Etruscans at the end of the sixth century, at first as a military garment; later as evidence of citizenship and rank, since only soldiers could have citizens' rights, cf. *populus*.[43]

Cf. Festus, 107 L, "Lucomedi a duce suo Lucomo dicti qui postea Lucereses sunt appellati". Cf. Prop. 4.1.29, Lycmon (Lygmon). Dumézil, *Jupiter Mars Quirinus IV*, *op. cit.*, 116: Lucumo = Lygmon - Lycomedius, with earlier refs.; and cf. Fell, *op. cit.*, 43 f. Cf. *infra*, note 44.

[40]   Military terms, Ernout, *BSL* 30 (1930), 82 f., esp. 104 f., 113, 117; he lists also *galea, galerus* (leather helmet), not accepted by Walde-Hofmann. For the metal helmet, Fell, *op. cit.*, 24. τήβεννα: Polybios is the first to use the word, which he probably learned during his long stay in Italy. Polybios and Dionysios of Halicarnassus, 2.70; 3.61, etc., use the word as a translation of toga.

[41]   E. H. Richardson, "The Etruscan Origin of Early Roman Sculpture", *MAAR* 21 (1953), 110 f. J. Heurgon, *La vie quotidienne chez les Etrusques* (Paris 1961), 219.

[42]   Eric Baade, letter of June 21, 1967: "The Athenians solved the problem by cutting off all this extra cloth; but since without the weight of cloth crossing on the shoulder the garment wouldn't stay on, a brooch had to be used. This gives us the *chlamys*[...]the toga appears among the Etruscans in the same sort of context as the *chlamys* among the Athenians; so we can perhaps assume that it represents the Etruscan solution of the same problem. They preserve the length of the *himation*, so that it will stay on, but narrow the width to a point at each end to relieve the left arm of all those hampering folds." I thank Eric Baade for permission to report on his theory, and plan to go into the problem of Etruscan and Roman dress elsewhere.

[43]   A. Alföldi, *Der frührömische Reiteradel und seine Ehrenabzeichen* (Baden-Baden 1952), 36 f. Alföldi compares the garment to the later general's *paludamentum*, which he says is a longer version (37). But the *paludamentum* is not rounded like the *trabea* or toga; and it is shorter than the toga. I think Mr. Baade is correct here in pointing out that the (short) *paludamentum* was adopted when the toga grew too long to be practical for the army. The knights went into battle wearing nothing but

Let us try to visualize the moment in history when the word *triumphus*, or rather *triumpe*, came into Latin. The archaeological evidence I shall deal with elsewhere, but I can briefly summarize my conclusions here. The form in which the triumphal ritual was preserved, in nearly all its details and topography, shows that it was crystallized at the end of the sixth century B.C.

The scene is therefore Rome under the Tarquins; the triumph is that of the Etruscan king, or tyrant,[44] of Rome. Surrounded by his cheering soldiers, the victorious king rides in a chariot around the Palatine and up the Sacred Way — the ancient boundaries of the city — and ascends the Capitol to the temple of Jupiter Optimus Maximus, whose dedication date of 509 B.C. constitutes the keystone for any chronological reconstruction of early Rome. "... cum imperatore milites redeuntes clamitant per urbem in Capitolium eunti 'Io triumphe!'" The connection between the Etruscan temple which was the goal of the procession, and the Etruscan marching or dancing cheer, which henceforth gave its name to the celebration, is thus clearly stated. The more obvious, outer forms of the triumph from then on were Etruscan; but the religious bases of the triumph, the meaning of the ritual, the itinerary of the procession, and the purificatory sacrifice at the end were all much older.[45] Like the ritual of the Arval Brothers, the triumph was given a new form by the Etruscans at the end of the sixth century.

The history of the word *triump(h)us* points to the same moment in time. The Roman priests who performed and explained the ritual of the Carmen Aruale in the sixth century understood the Etruscan word *triumpe*, apparently referring to a musical beat, and translated it as *tripudium* in the introduction to the hymn. The term was probably also understood by a well-educated minority as long as Etruscan remained

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the short rounded toga called the *trabea*, and the *perizoma* (Polybios 6.25.3-11). *Populus*, obviously connected with *populor*, meant originally "the people under arms", "the army" ("Kriegsvolk", Walde-Hofmann, s.u. *populor*); it is also an Etruscan word according to several distinguished scholars (Kretschmer, Devoto, Krahe, Altheim, Terracini, Ernout, Walde-Hofmann s.u.); cf. Etr. *puplu* = *Populonia*; *publicus* comes from *poplicus* (attested in archaic inscriptions) by crossing with Latin *pubes*.

[44] Recent studies have emphasized the difficulty of classifying Etruscan titles. Heurgon, "L'état étrusque", *op. cit.*, (n. 46), 68 f., 74 f. Bibliography in Pallottino, *Etruscologia*, *op. cit.*, 208 f. Lucumo, an Etruscan title (Servius *ad Aen.* 2.178: "lucumones qui sunt reges lingua Tuscorum"; cf. Pallottino 423) is preserved in Roman tradition as a proper name for Tarquin.

[45] Pre-Etruscan basis for the triumph, cf. *supra*, notes 31, 33. De Francisci, *op. cit.*, 31 f. Expiation of blood guilt, H. Wagenvoort, *Roman Dynamism* (Oxford 1947), 163 f., and E. Kornemann, "Heilige Städte," *Die Antike* 7 (1932), 190 f. Ogilvie, *loc. cit.*, for the *uotum*. Alföldi, *Early Rome and the Latins*, *op. cit.*, deals with other early, pre-Etruscan rites in his chapter, "Topographical and Archaeological Realities", 296 f. Temple of Jupiter Capitoline: Momigliano, *JRS* 1963 *op. cit.*, 95 f.; and review of H. Müller-Karpe, *Zur Stadtwerdung Roms* (Heidelberg 1963) and other books on early Rome, in *Riv. Stor. Ital.* 75 (1963), 882 f. P. Fraccaro, "Arcana Imperii," speech read at the Circolo Filologico, Milan, 1931, published in *Opuscula* (Pavia 1956), 66; and "La storia romana arcaica", *Rend. Ist. Lombardo di Scienze e Lettere* 85 (1952), 98, also in *Opuscula*, 9.

the cultured language of the Romans, down into the fourth century B.C.[46] I doubt
that its original meaning had ever been understood by all the cheering Roman throngs
who shouted out *Triumpe*! in the victory celebration. Then, when Greek took the
place of Etruscan as the language of culture, the word seems to have fallen into disuse
as a technical term for a dance, and was used only as the name of a specific festival,
the most spectacular of Roman rituals, the triumph.

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[46] Livy 9.36. The language was still studied by the ruling aristocracy in Rome in the fourth century
(308 B.C.!). J. Bayet, "Etrusques et Italiques; position de quelques problèmes", *St.Etr.* 24 (1955-6), 14.
A. Momigliano, "L'ascesa della plebe nella storia arcaica di Roma", *Riv. Stor. Ital.* 79 (1967),
297-312.